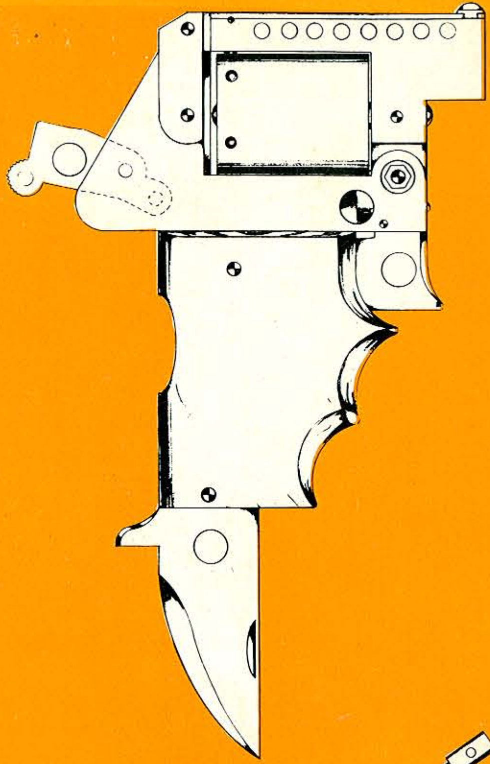
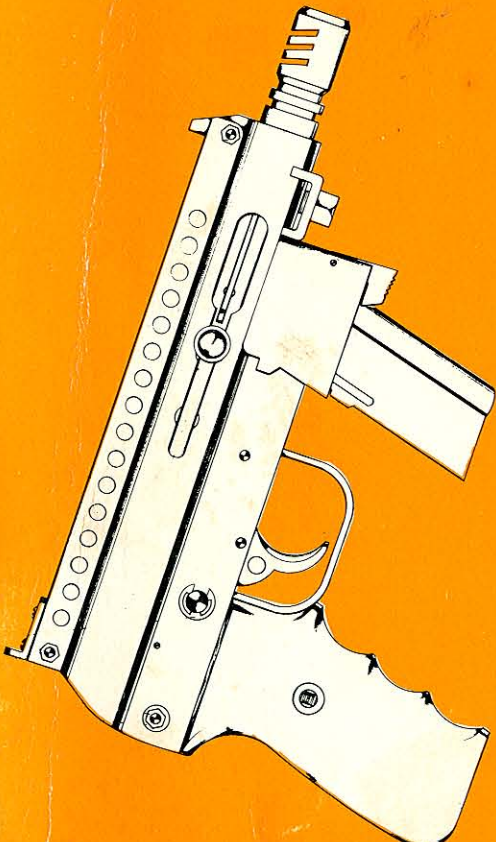
AUTOMATIC AND CONCEALABLE FIREARMS DESIGN BOOK, VOLUME II











Automatic & Concealable Firearms Design Book Volume II

by the Editors of Paladin Press Books

Published by Paladin Press, a division of Paladin Enterprises, Inc.,
PO Box 1307, Boulder, Colorado, 80306.

ISBN 0-87364-177-9

Printed in the United States of America

WARNING

It is against the law to manufacture a firearm without an appropriate license from the federal government. There are also state and local laws prohibiting the possession of such weapons in many areas. Severe penalties are prescribed for violations of these laws. Be warned!

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FORWARD

Firearm manufacturers today employ production techniques which can differ greatly in approach and form. Some have maintained their traditionally high production standards, while others utilize various short-cut manufacturing methods. Though such short cuts help keep prices down, too often the quality of the finished weapon will suffer as a consequence.

Stamping and casting of parts, two very effective and economical fabrication methods, are employed almost universally by current arms manufacturers. Many reliable, good quality firearms are produced every day with the help of these cost-cutting measures. These techniques were originated by the Germans during World War II, and have been in use ever since.

The primary purpose of this series is to familiarize gunsmiths, collectors, and law enforcement officers with improvised firearms. These volumes incorporate detailed drawings in order to teach the reader principles of automatic weapons conversions, and other mechanical aspects related to improvised weapon construction and modification. The illustrations will also enable law enforcement agents to identify and classify improvised weapons.

Another purpose exists for these books as well. The editors are aware that our society may face violent turmoil sometime in the future. Should this situation occur, the individual citizen will have to depend on himself for protection of his life, family, and property. His means of protection will most likely be a firearm. If he does not have a gun, then these volumes can help him build one. They may also aid him in modifying and improving his commercial firearms, if necessary.

INTRODUCTION

Improvised weapons, most notably firearms, have gained great popularity in the rural areas of the world. The residents of such areas are generally poor, and cannot afford to buy commercially produced firearms. There is not much access to commercial firearms in these areas anyway.

Presented in this book are improvised firearm designs as developed and hand-built by rural gunsmiths in the Philippines. Neighboring countries such as Bornea, Sumatra, and Malaysia have their own versions of these weapons. They may vary slightly in materials, style, and size. Rural gunsmiths in Pakistan and India also produce variants of these designs, many being of relatively good quality.

Most of the firearms built by villagers in the Philippines are completely handmade. The gun parts are individually cut and formed to shape with hand tools. Screws, rivets, and brazing hold the parts together. Some customers special order their firearms, and provide high quality materials for the gunsmith to work with. Most of the jungle gunsmiths make their living by hand-building firearms, and are accomplished in their work. When given high quality materials to use, as with a special order, they can fabricate firearms of surprising quality.

Consider the source of these weapons. It will often be a small hut furnished with a simple workbench, anvil, vise and blacksmith's furnace. The gunsmith's tools are files, hacksaws, punches, and hammers. Such a basic workshop greatly resembles the blacksmith's shops found in the rural Philippines. No wonder, then, the village blacksmith often builds and sells his own improvised firearms where there is no farm equipment to repair.

In urban areas of the Philippines, better equipped improvised gunsmiths also operate. Here they have access to better quality materials, and electricity. Such illegal gunshops are not only found in relatively poor countries, but can be found in any modern nation that restricts the private ownership of firearms.

Many of the Philippino gunsmiths have produced copies of Smith & Wesson and Colt revolvers, and even Colt .45's. The barrels of these handguns are rifled in a crude manner, using improvised techniques. External configurations are well copied, as are barrel and receiver markings. A closer examination will show brazing marks on every joint, especially on the receiver of a revolver. The barrel, and sometimes a ventilated rib, are also brazed in place to the receiver.

An internal examination of a Philippino revolver copy will reveal an entirely simple double-action lockwork. The use of this action precludes the need for internal machining of the receiver. The lockwork resembles that found in Colt revolvers. However, the improvised model has no rebounding hammer; the hammer always rests against the firing pin. This system is very dangerous, and demands that the cylinder be positioned so that the firing pin points between the chambers of the cylinder when not in use.

Some special-order Smith & Wesson copies are copied almost exactly, externally and internally. These show internal machining and a rebounding hammer as found in the originals. But brazing marks are still noticeable when closely examined.

Because of the high costs involved, most Philippino improvised firearms are not special ordered. A villager will often settle for any firearm that works. It is a common saying in the remote areas of the Philippines that a *discharge* from a hand-made firearm cannot be distinguished from a commercial model, especially at night.

The production of these modern improvised firearms began in the Philippines when WW II ended. At that time, bandits and cattle rustlers plagued the rural areas of the island chain. The closest police authorities to these areas were three or more days distant. Most of the outlaws had been guerrilla fighters against the Japanese during WW II, and did not recognize the independent government arranged during the American occupation after the war. The majority of the Philippino citizens

recognized the new government, however, and stopped supporting the guerrilla movement.

In turn, the outlaws fled to the mountains, where they began the systematic terrorization of the rural villagers. After stealing anything of value, the outlaw gangs would burn entire villages and their surrounding crop lands. They would finish by stealing the villagers' cattle and water buffalo, upon which the peasant farmers depended for food, and for power to cultivate their land.

This situation led the villagers to begin improvising their own weapons. Jungle workshops began appearing, particularly in the central and northern sectors of Luzon, one of the islands in the Philippine chain.

Villagers first improvised a weapon popularly called "The Flying Icepick." It was simply a sling-shot designed to fire a sharpened length of wire fletched with fine feathers. The missile's head was flattened, sharpened, and notched. When firing, the notches were engaged with a wire catch, found in place of the pouch normally associated with sling-shots. Firing was then achieved in the same manner as with a normal sling-shot. To make the missile more lethal, villagers sometimes dipped the wire point in snake venom.

Along with the bow and arrow, the "Flying Icepick" provided the remote villager with their only means of defense against the outlaw gangs for some years. Their weapons were most effective at night, when they could silently strike at the bandits, killing some of them and unnerving the remainder. But the bandits soon altered their tactics. They began attacking villages by day, taking a great toll among the primitively armed peasants.

Villagers in turn began improvising their own firearms in earnest. Jungle gunsmiths in Ilocos province began making a firearm called the "Paltic". It soon became popular in other areas of the Philippines. Due to scarce supply of ammunition, the most common home-made gun was and still is the shotgun. Many of these are of the "Slam Bang" design, being made entirely from water pipe. The most common improvised shotgun is single shot, utilizing a break open action, and with a very long barrel. Its hammer is exposed and is single action. A separate piece is made and carried to manually eject spent shells from the shotgun's chamber. Cutdown versions of these weapons have also appeared, and are known as shotgun pistols.

To increase firepower, the village gunsmiths have made bolt action, magazine fed shotguns. These are copied from commercial rifles. The magazines' capacities range from four rounds in 12 gauge, to ten rounds in .410 gauge. Brazing and riveting are used extensively in improvising the receivers and magazines of these weapons, with great success.

Muslim gunsmiths in southern Mindinao have produced the most unusual version of the improvised shotgun to appear lately. These are revolving cylinder shotguns with a five or six round capacity. Some of these weapons have been confiscated, and are found to be well-built and fairly sophisticated. Most of these are manually operated, though some .410 models use the double-action lockwork found in modern revolvers. The Muslim gunsmiths also rely heavily on brazing when fabricating their firearms.

The popularity of improvised firearms among Philippino gangs reached its peak during the early 1960's. Many of the gangsters at this time were ex-convicts who had learned improvised gunsmithing while in prison. Once released from jail, the convicts would build their own weapons, since Philippine law forbids them ownership of weapons. Stricter police control has since subdued these gangs' activities.

A word of caution here. Any firearm improvised from cheap materials of unknown analysis, especially those crudely made, are dangerous. Philippine authorities have on record many instances where Slam Bang shotguns have blown-up in the face of the operator. Similarly, revolver copies have exploded like fragmentation grenades while being fired. This is due to an excessive gap between cylinder and barrel, allowing propellant gasses to escape there, and causing lead to stack in the revolver barrel.

Improvised firearms, then, have caused innumerable accidents. But the poor farmer or villager has no choice but to rely on home-made weapons for self-defense. He has a family and property to protect against well-armed terrorist-bandits. More often than not, his protection takes form as a simple firearm built from salvaged materials in a jungle workshop. For him, it is foolish to go unarmed any longer, for he has lived through the hard times of the past. And he knows that harder times may still come in the future.

COLT .45 MACHINE PISTOL CONVERSION

SPECIFICATIONS:

CALIBRE .... .45 ACP
TYPE OF FIRE .... SELECTIVE SEMI AND FULL AUTOMATIC (FIRES SEMI AUTOMATIC ON CLOSED BOLT AND FULL AUTOMATIC ON OPEN BOLT.)
CAPACITY .... 7 SHOT MAGAZINE STANDARD; 30 SHOT MAGAZINE AVAILABLE
BARREL LENGTH .... 5 INCHES STANDARD; 6 INCHES AVAILABLE

REMARKS: NUMEROUS ACCESSORIES ARE AVAILABLE: MAXI COMPENSATORS, SLIDE RELEASES, TIGHT BUSHINGS, SPEED SAFETY, ETC.

SPECIAL NOTE: COLT .45 VARIATIONS AND IMITATIONS SUCH AS THOSE MANUFACTURED IN EUROPE, SOUTH, AND CENTRAL AMERICA CAN BE SIMILARLY CONVERTED TO SELECTIVE FIRE.

SYSTEM OF OPERATION:

TO FIRE SEMI AUTOMATIC: Set the selector lever to the horizontal position. To disengage the selector lock from the underside of the slide, press the top portion of the selector lever to withdraw its under lug from mating with the slide edge. Once the lug clears the slide edge, it can be rotated horizontally in either direction. Once the selector is set in detent in the horizontal position, the tripping of the selector is out of engagement with the connector lever. Drawing the slide to the rear will cock the hammer and load the chamber in the usual fashion, maintaining that position until the trigger is pressed. The semi automatic operation fires from the standard closed bolt system. *It is important to press the auxiliary trigger (front) at all times so that the front (auxiliary) sear does not catch the slide in open position.*

TO FIRE FULL AUTOMATIC: Set the selector lever to its position locking the under lug to the slide. The lug must mate with the edge of the slide as tightly as possible to avoid accidental disengagement during full automatic operation of the slide. The selector's detent spring must be strong to retain its engagement firmly in this position.

In the full automatic setting, the auxiliary trigger mechanism takes over. The slide will be held in the open bolt system by the front (auxiliary) sear, ready to fire. The original semi automatic trigger mechanism is activated automatically by the slide closing, once the selector tripping shoulder makes contact with the hammer sear connector, whether the rear (original) trigger is pressed or not. Once the selector lever tripping shoulder pushes the connector, the sear will disengage from full cocked hammer, releasing it to strike the firing pin and ignite the cartridge. This operation is continuous until the front trigger is released or the magazine empty.

CAUTION: NEVER RETRACT THE SLIDE IF THE SELECTOR IS SET TO FULL AUTOMATIC WHEN THE GUN IS LOADED AND THE AUXILIARY TRIGGER MECHANISM IS NOT INSTALLED. THE WEAPON WILL FIRE FULL AUTOMATIC EVEN WITHOUT PRESSING THE TRIGGER SINCE THE SELECTOR TRIPPING SHOULDER WILL AUTOMATICALLY OPERATE THE CONNECTOR LEVER DURING BOLT CLOSING.

SAFETY OPERATION:

The original safety can be used on both semi (closed bolt) and full automatic (open bolt) functioning. However, care must be taken that the auxiliary (front) trigger not be pressed if the selector is set to full

automatic and the slide is held open. The connector pin connected to the sear will break if the auxiliary trigger is pressed in open bolt with the selector in the full automatic mode.

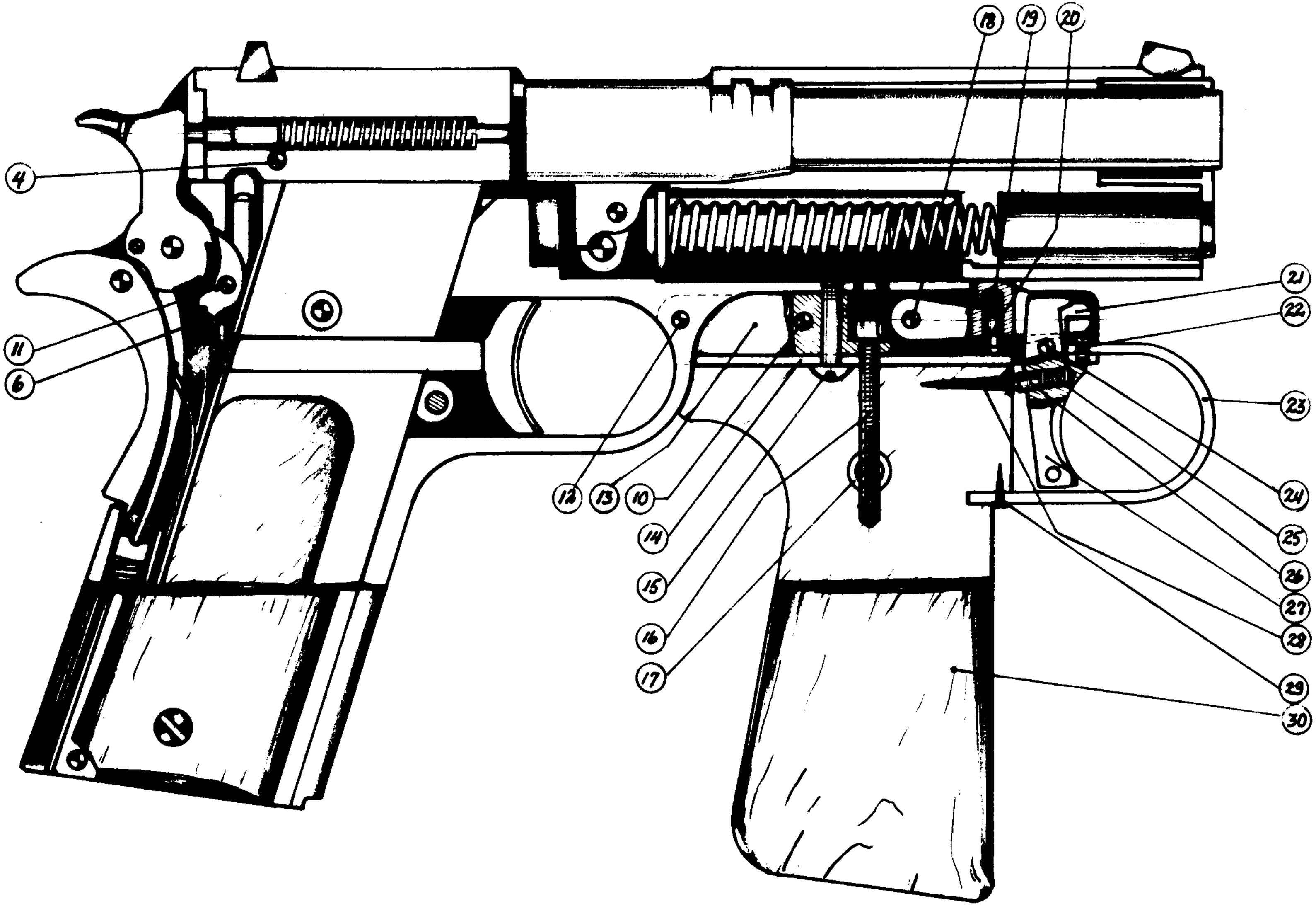
CONSTRUCTION DETAIL OF THE AUXILIARY TRIGGER MECHANISM:

The auxiliary trigger housing is a formed 1/16 inch steel sheet. It contains the auxiliary sear and trigger and can be improvised by machine or handmade. The housing is secured in place to the trigger guard and to the front portion of the receiver by a screw and by a pin riveted to a plate. An insert is used to strengthen the housing and can be riveted or brazed in place. The trigger guard is equal in width to the receiver trigger guard and secured to the housing by a small screw. It can be brazed to the housing if so desired. The other end is pointed and is pressed to the wood grip, secured by a small nail or screw.

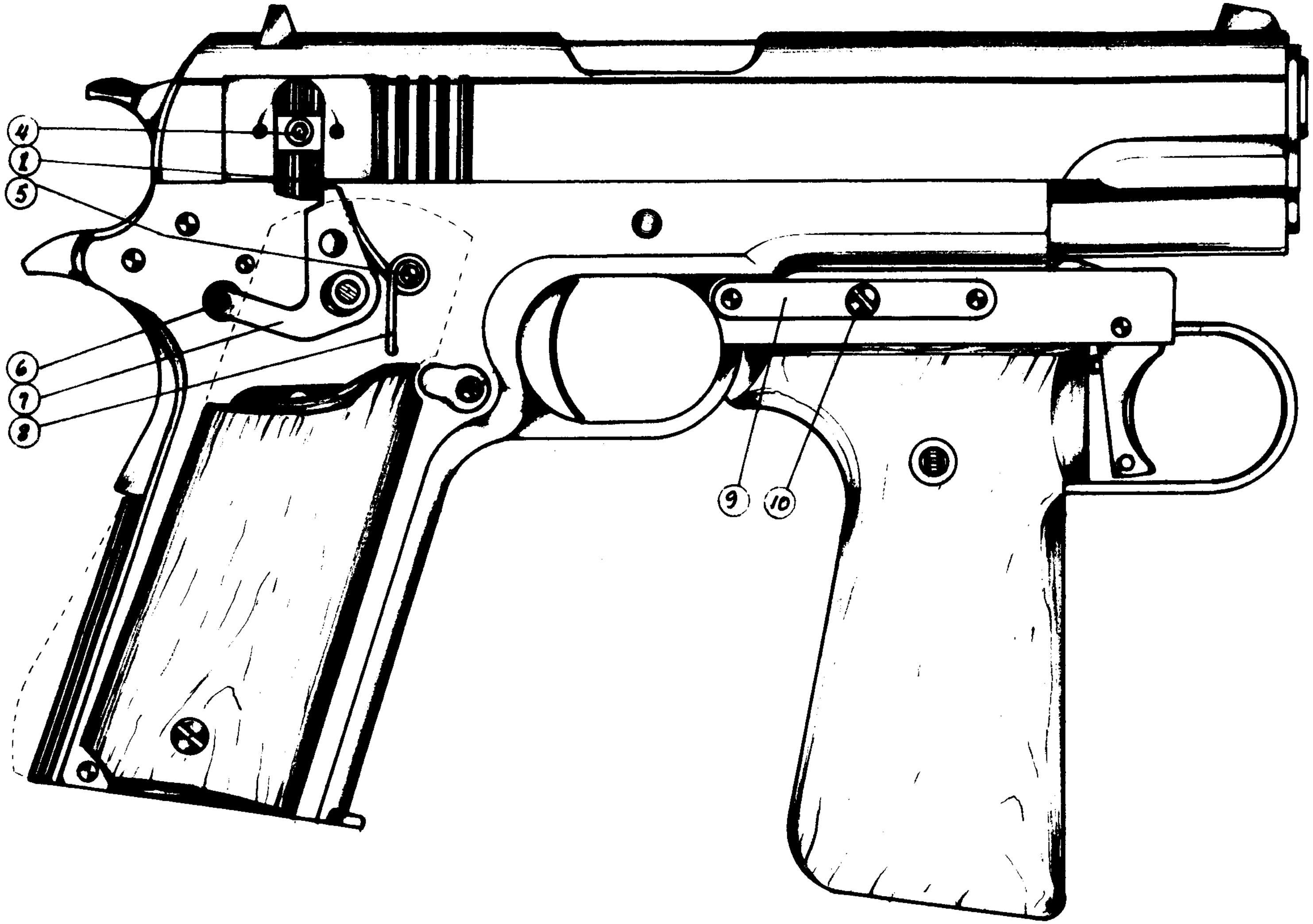
The auxiliary housing assembly must be attached to the receiver body before the grip stock can be secured to the auxiliary housing. An assembly hole must be drilled in the receiver for the grip screw.

PARTS LIST

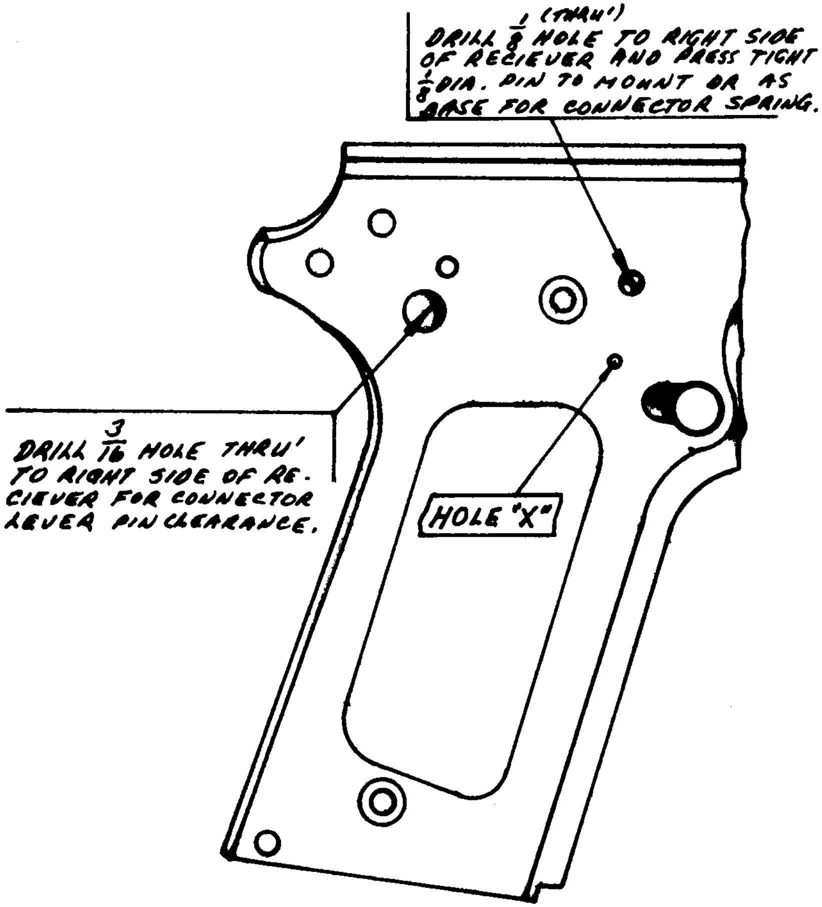
1. *Selector lever*
2. *Selector lever index ball spring*
3. *Selector lever index ball*
4. *Selector lever retaining screw; chambered for selector lug, upward clearance to disengage from the slide edge.*
5. *Connector spring base; 1/8 inch diameter pin - same height as the stock screw bushing.*
6. *Connector mating pin to sear*
7. *Connector lever*
8. *Connector lever spring*
9. *Connecting pins, plate for auxiliary trigger housing*
10. *Plate retaining screw; left side hole of the auxiliary housing must be threaded for this screw.*
11. *Replacement sear; with provision hole for connector mating pin*
12. *Auxiliary housing rear securing pin*
13. *Auxiliary trigger housing insert; to be brazed or riveted to housing*
14. *Auxiliary trigger housing*
15. *Auxiliary housing connecting screw to receiver body*
16. *Grip stock screw; hex type*
17. *Stock screw bushing; pressed horizontally to stock*
18. *Front sear pin*
19. *Sear spring*
20. *Sear spring plunger*
21. *Sear*
22. *Trigger guard connecting screw; guard can also be brazed in place*
23. *Trigger guard*
24. *Trigger pin*
25. *Trigger spring*
26. *Trigger spring plunger*
27. *Trigger*
28. *Nail; acts as support against plunger*
29. *Small nail securing the bottom part of trigger guard to stock*
30. *Wood stock; one piece construction (plastic is adaptable)*

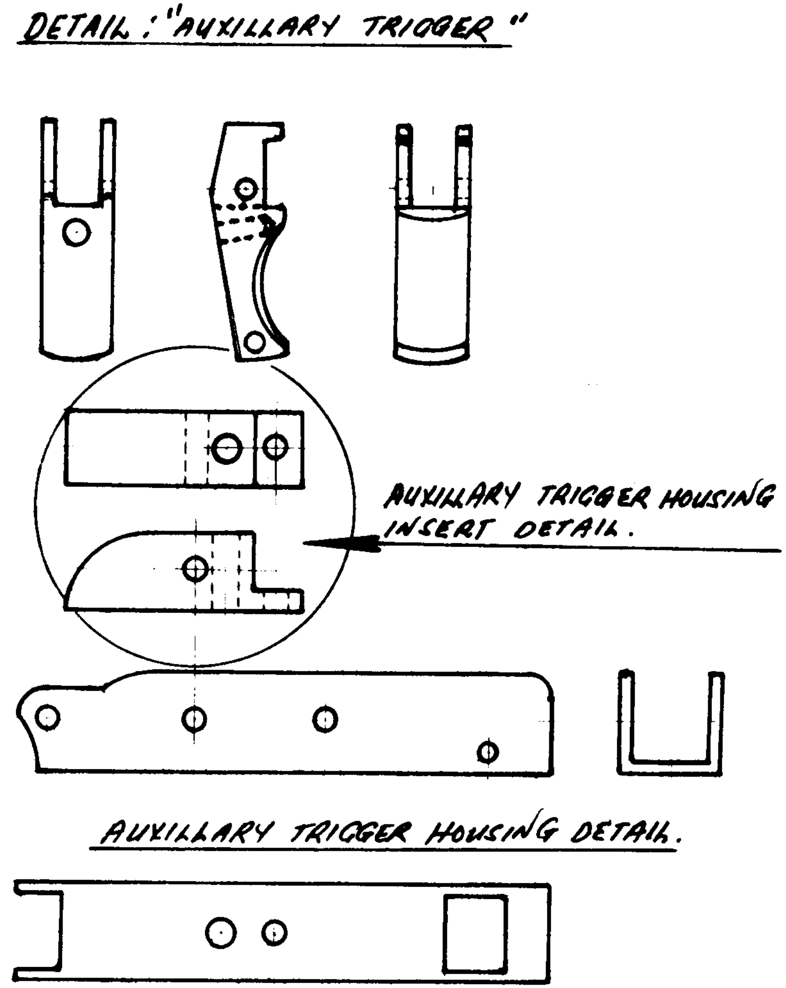


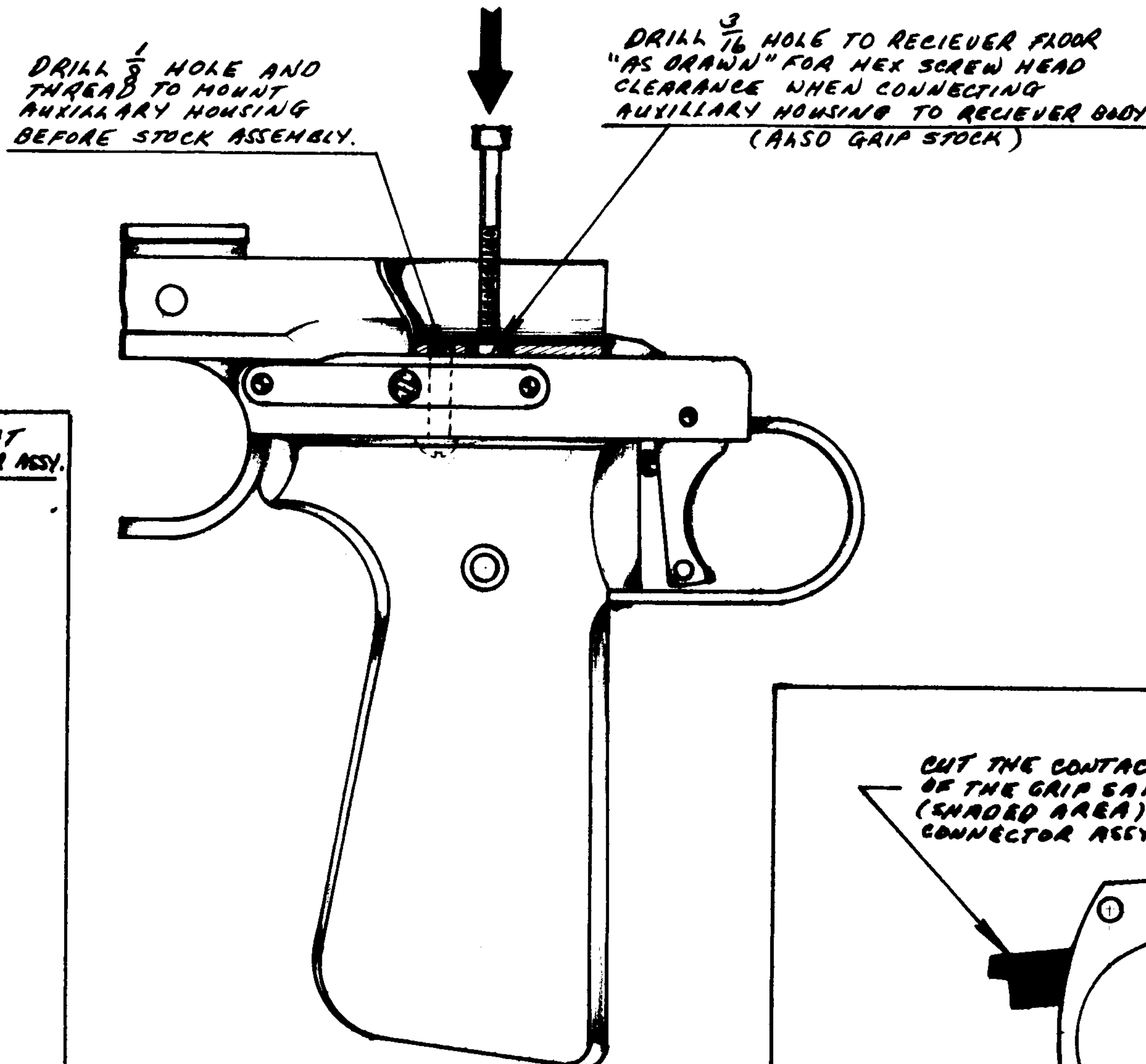
COLT .45 MACHINE PISTOL CONVERSION

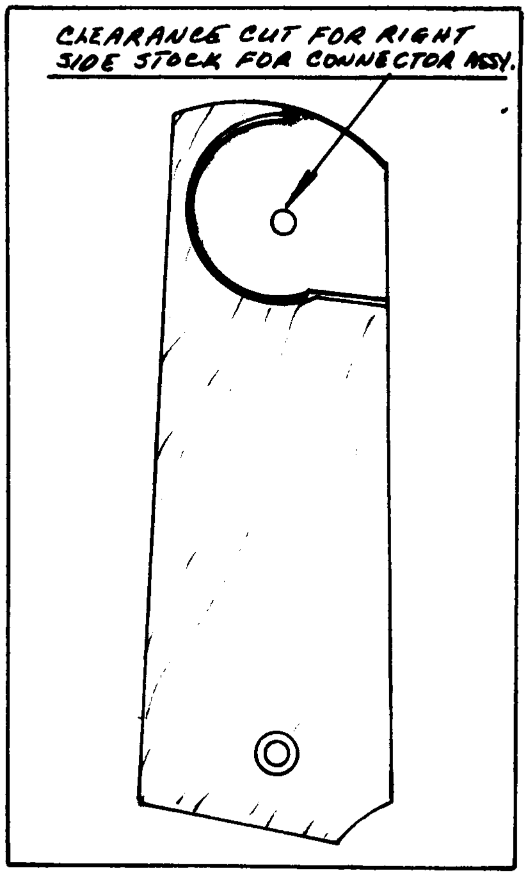


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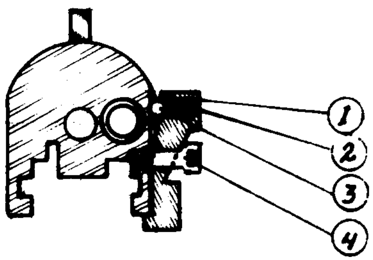

DRILL 1/8 (THRU') HOLE TO RIGHT SIDE OF RECIEVER AND PRESS TIGHT 1/8 DIA. PIN TO MOUNT OR AS BASE FOR CONNECTOR SPRING.
DRILL 3/16 HOLE THRU' TO RIGHT SIDE OF RECIEVER FOR CONNECTOR LEVER PIN CLEARANCE.
HOLE "X"


DETAIL: "AUXILLARY TRIGGER"
AUXILLARY TRIGGER HOUSING INSERT DETAIL.
AUXILLARY TRIGGER HOUSING DETAIL.

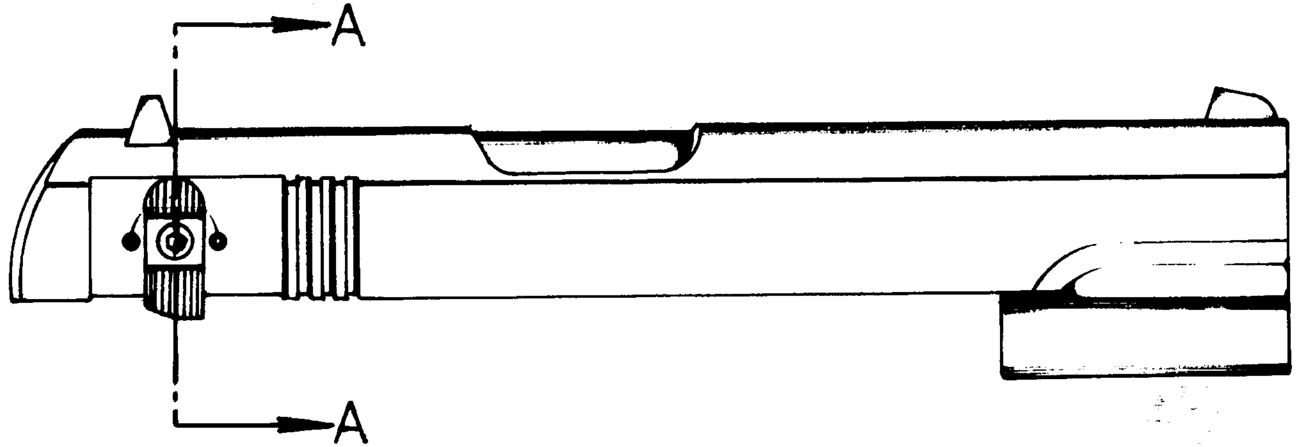

DRILL 1/8 HOLE AND THREAD TO MOUNT AUXILIARY HOUSING BEFORE STOCK ASSEMBLY.
DRILL 3/16 HOLE TO RECIEVER FLOOR "AS DRAWN" FOR HEX SCREW HEAD CLEARANCE WHEN CONNECTING AUXILIARY HOUSING TO RECIEVER BODY.
(ALSO GRIP STOCK)

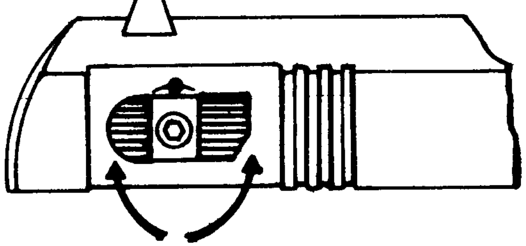

CLEARANCE CUT FOR RIGHT SIDE STOCK FOR CONNECTOR ASSY.


CUT THE CONTACT TANG OF THE GRIP SAFETY (SHADED AREA) FOR CONNECTOR ASSY. CLEARANCE.
GRIP SAFETY



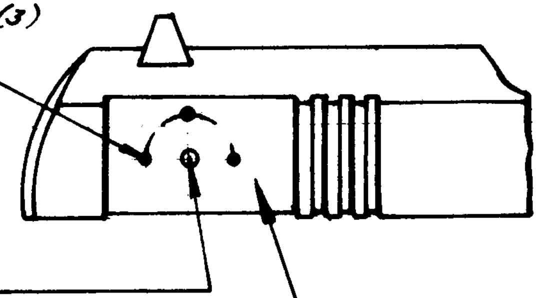
Section "AA"





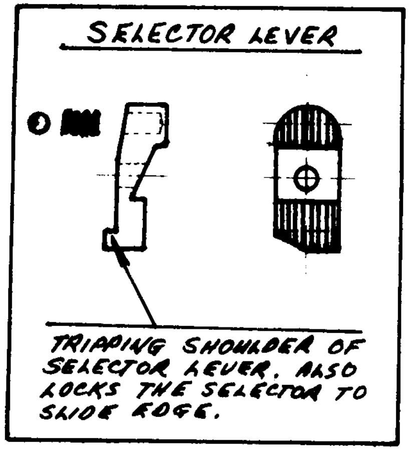
SELECTOR CAN BE ROTATED ON EITHER WAY FOR SEMI-AUTO. FUNCTIONING. TRIPPING SHOULDER WILL NOT ENGAGE CONNECTOR TIP.

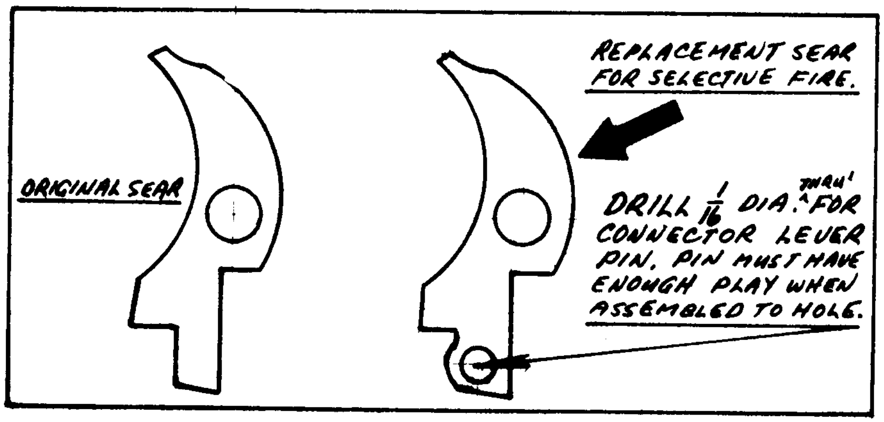
INDEX HOLES (3)

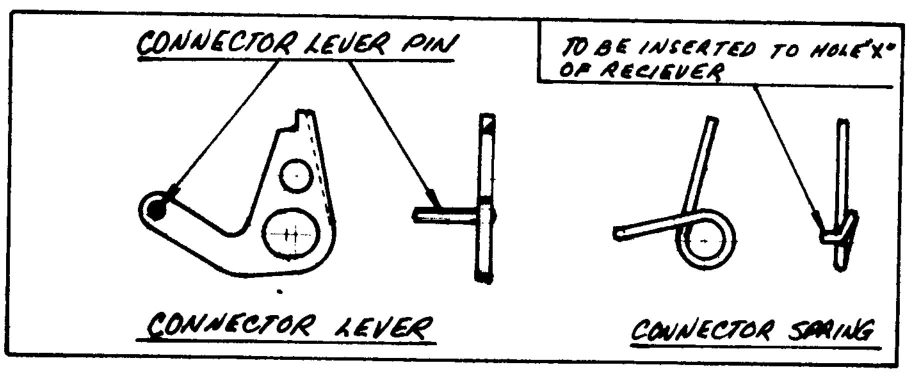


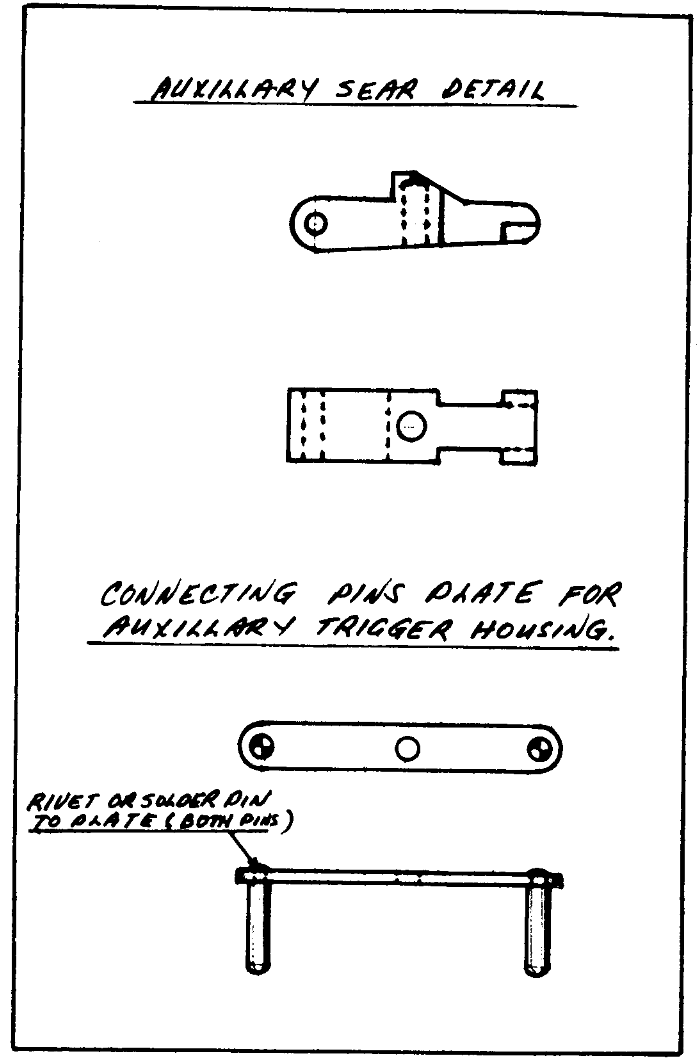
DRILL $\frac{1}{8}$ HOLE AND THREAD (SEE DIAGRAM) TO MOUNT SELECTOR LEVER

FILE SLIDE SERRATIONS AS DRAWN FOR SELECTOR LEVER CLEARANCE.


SELECTOR LEVER
TRIPPING SHOULDER OF SELECTOR LEVER. ALSO LOCKS THE SELECTOR TO SLIDE EDGE.


ORIGINAL SEAR
REPLACEMENT SEAR FOR SELECTIVE FIRE.
DRILL 1/16 DIA. THRU' FOR CONNECTOR LEVER PIN. PIN MUST HAVE ENOUGH PLAY WHEN ASSEMBLED TO HOLE.


CONNECTOR LEVER PIN
TO BE INSERTED TO HOLE "X" OF RECIEVER
CONNECTOR LEVER
CONNECTOR SPRING


AUXILLARY SEAR DETAIL
CONNECTING PINS PLATE FOR AUXILLARY TRIGGER HOUSING.
RIVET OR SOLDER PIN TO PLATE (BOTH PINS)

SHOTGUN PISTOL

SPECIFICATIONS:

CATEGORY .... HANDMADE - IMPROVISED
CALIBRE .... 410 TO .12 GAUGE
CAPACITY .... SINGLE SHOT - DOUBLE BARREL VARIANTS POSSIBLE
TYPE OF OPERATION .... MANUAL

REMARKS: VARIOUS STYLES AND BARREL LENGTHS ARE ADAPTABLE.

TO LOAD:

To load the pistol, rotate the latch lever 180 degrees counter-clockwise. The latch lever pin secures the barrel connecting lug to the receiver frame. Once the latch lever is rotated, the barrel can be hinged open for loading.

After inserting the cartridge, push the barrel back to its seat on the receiver. Then rotate the latch lever clockwise to lock the barrel connecting lug to the receiver body. The barrel chamber must be center-bored for a cartridge rim seat.

TO FIRE:

Once the barrel has been fully seated and locked in place, pull the cocking handle on top of the bolt tube to the rear until it engages the sear. Pressing the trigger will release the bolt (which contains the firing pin) from sear engagement, discharging the pistol.

SAFETY MECHANISM:

A safety lever is incorporated in this model to prevent accidental release of the bolt mechanism. When the bolt is in the full cocked position, engaged with the sear, the safety lever pin blocks and prevents any movement of the sear. The bolt also can be lowered by simply easing the cocking handle slowly to its rest position. Note: bolt cannot be cocked if safety is applied.

CAUTION: IT IS NOT SAFE TO CARRY THIS PISTOL LOADED. THE FIRING PIN IS PRESSING AGAINST THE CARTRIDGE PRIMER WHEN THE BOLT IS IN ITS REST POSITION. LOAD ONLY WHEN READY TO FIRE. OTHERWISE DRAW THE BOLT OPEN AND APPLY THE SAFETY.

EXTRACTOR:

An improvised extractor is housed inside the grip base securing the breech block inside the bolt tubing. It is retained in place by a spring loaded plunger. Pull the extractor by its head under the grip base when needed.

CONSTRUCTION DETAIL:

Like most of the modern improvised methods, the receiver frame is a simple formed steel sheet about 1/16 inch thick. A pivot lug and connecting lug are brazed or welded under the barrel for loading and unloading purposes.

The barrel is thick seamless tubing (diameter depends on the calibre or gauge). A commercial type barrel is safer to use. The bolt tube is the same diameter as the barrel. It is retained to the receiver frame by the grip base connecting the breech block to the tube, and by its rear lug, which is welded or brazed in place.

The grip is one piece. Make it from wood or from plastic stock. It is to be inserted through the grip base. Secure it to the base by a single screw positioned at the back of the stock, mating to a threaded hole in the grip base.

All trigger mechanisms (trigger, sear, etc.) must conform in thickness (equally or less thick) with the barrel pivot lug, connecting lug, and rear

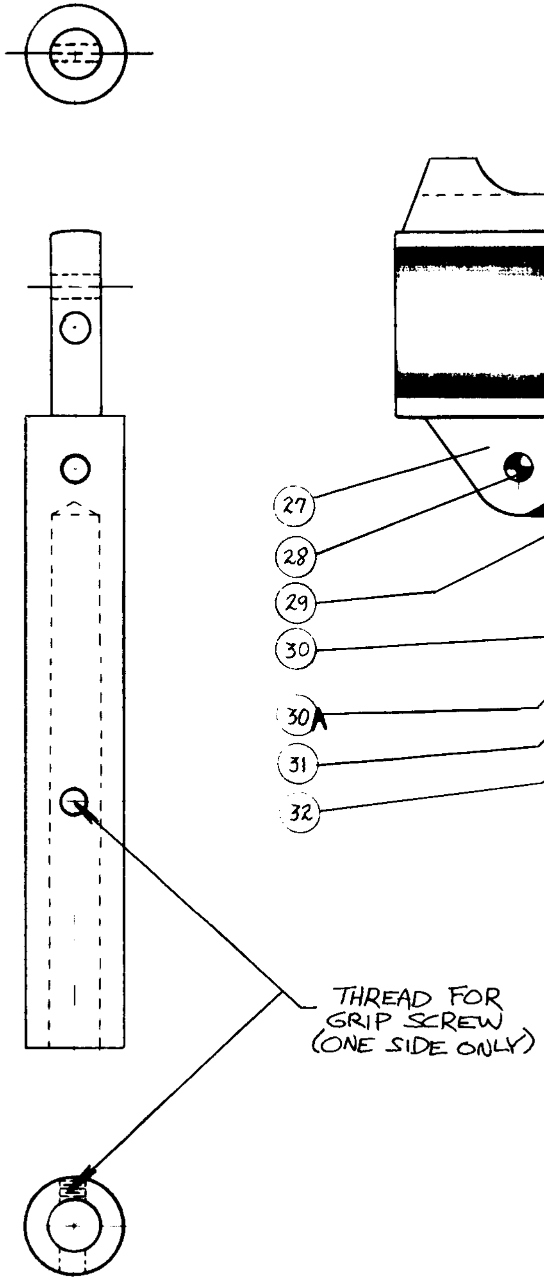
lug of the bolt tube in order to function freely when assembled inside the receiver frame; preferably 1/4 to 3/8 inch thick.

PARTS LIST

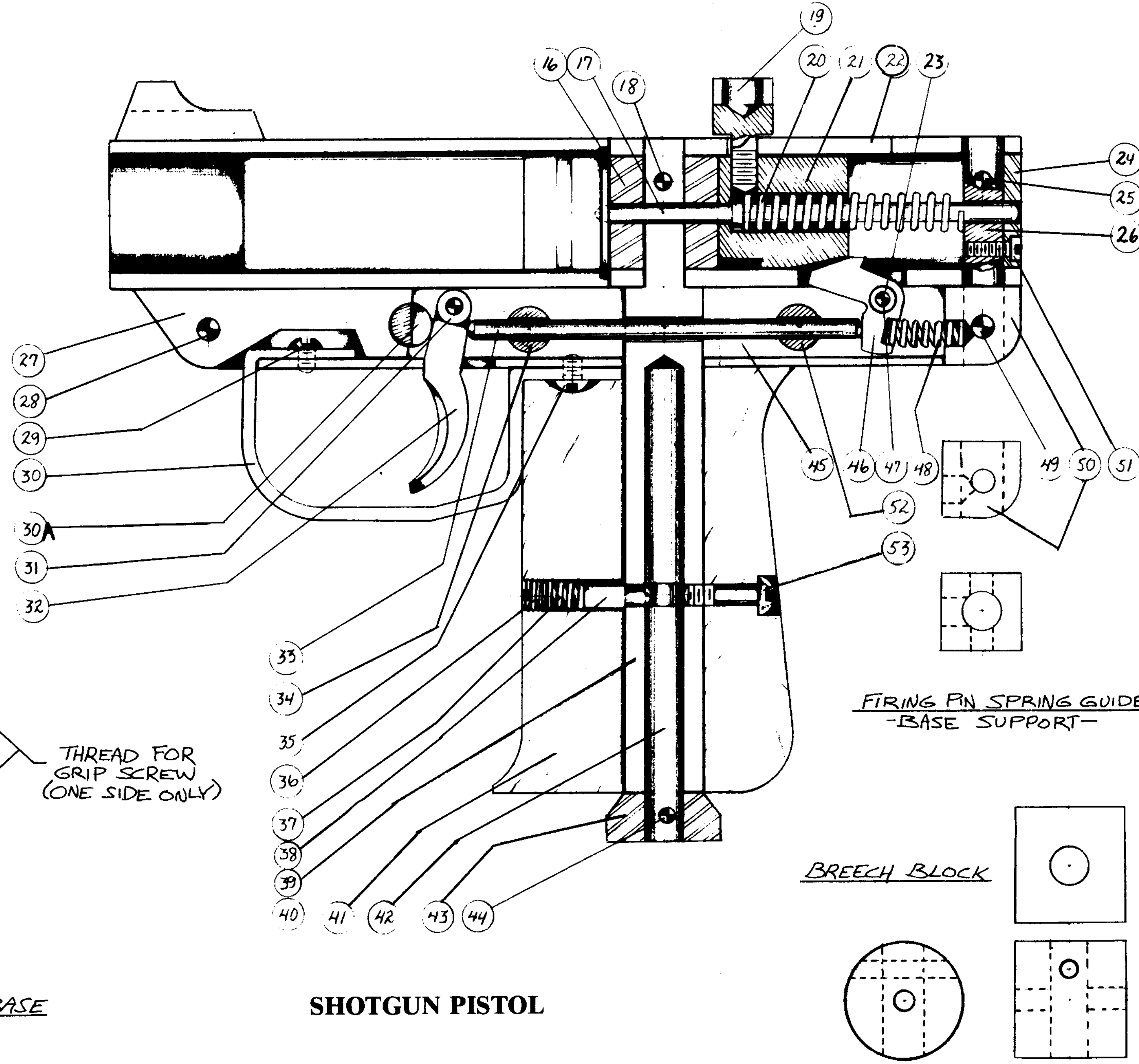
1. *Front sight - brazed or silver soldered in place (top of barrel)*
2. *Barrel - thick seamless tubing or cut down commercial barrel (chamber is counterbored)*
3. *Steel washer*
4. *Hex screw - securing barrel connecting lug to trigger housing*
5. *Barrel lug latch lever*
6. *Latch lever pin*
7. *Latch lever ball spring*
8. *Ball (steel)*
9. *Latch lever retaining pin - if possible roll pin*
10. *Hex screw - retaining firing pin spring & guide post and its base to trigger housing*
11. *Steel washer*
12. *Hex nut*
13. *Steel washer*
14. *Hex nut*
15. *Steel washer*
16. *Breech block*
17. *Firing pin*
18. *Breech block retaining post pin*
19. *Cocking knob*
20. *Firing pin spring*
21. *Bolt*
22. *Receiver - same diameter as barrel*
23. *Spacer (2 pr.) for sear pin*
24. *Receiver back cover*
25. *Firing pin spring & guide post retaining pin*
26. *Firing pin spring & guide post*
27. *Barrel connecting lug - brazed to barrel (½ in. thick plate)*
28. *Same as #4*
29. *Front screw retaining trigger guard*
30. *Trigger guard*

30A. *Same as #6*

31. *Spacer (2 pr.) for trigger*
32. *Trigger*
33. *Trigger bar*
34. *Trigger bar support pin (front)*
35. *Rear screw securing trigger guard*
36. *Extractor catch (plunger) spring plug-screw (headless type)*
37. *Plunger spring*
38. *Extractor catch (plunger type)*
39. *Main base for trigger housing & receiver (½ in. dia. post)*
40.
41. *Grip (one piece wood)*
42. *Extractor extension (handle)*
43. *Extractor head*
44. *Extractor retaining pin*
45. *Trigger housing - formed steel sheet*
46. *Sear*
47. *Sear pin*
48. *Sear spring*
49. *Same as #10*
50. *Firing pin & spring guide base support (½ in. thick plate)*
51. *Receiver back cover retaining screw*
52. *Trigger bar support pin (rear)*
53. *Grip screw*



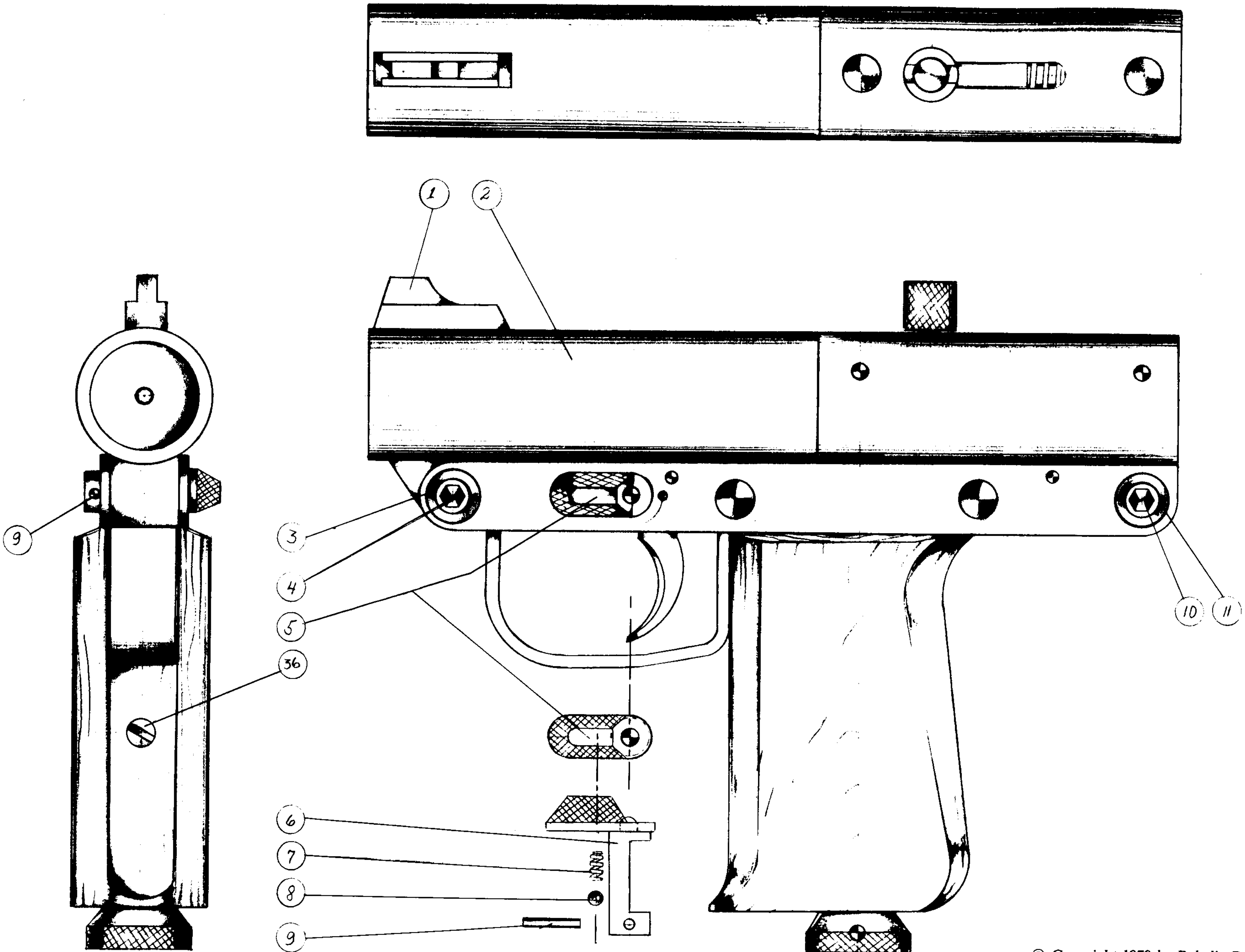
MAIN RECEIVER/GRIP BASE

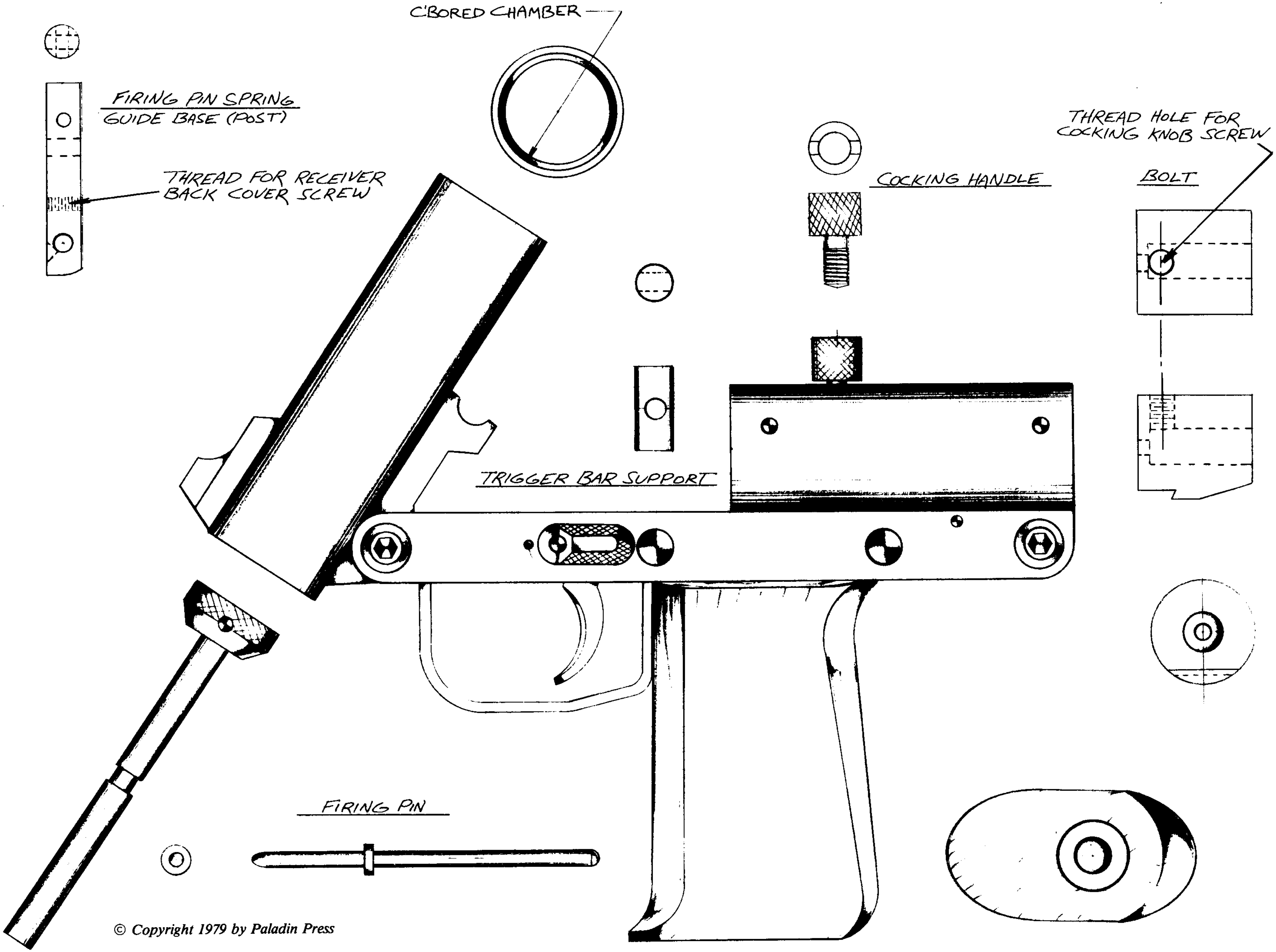


FIRING PIN SPRING GUIDE -BASE SUPPORT-

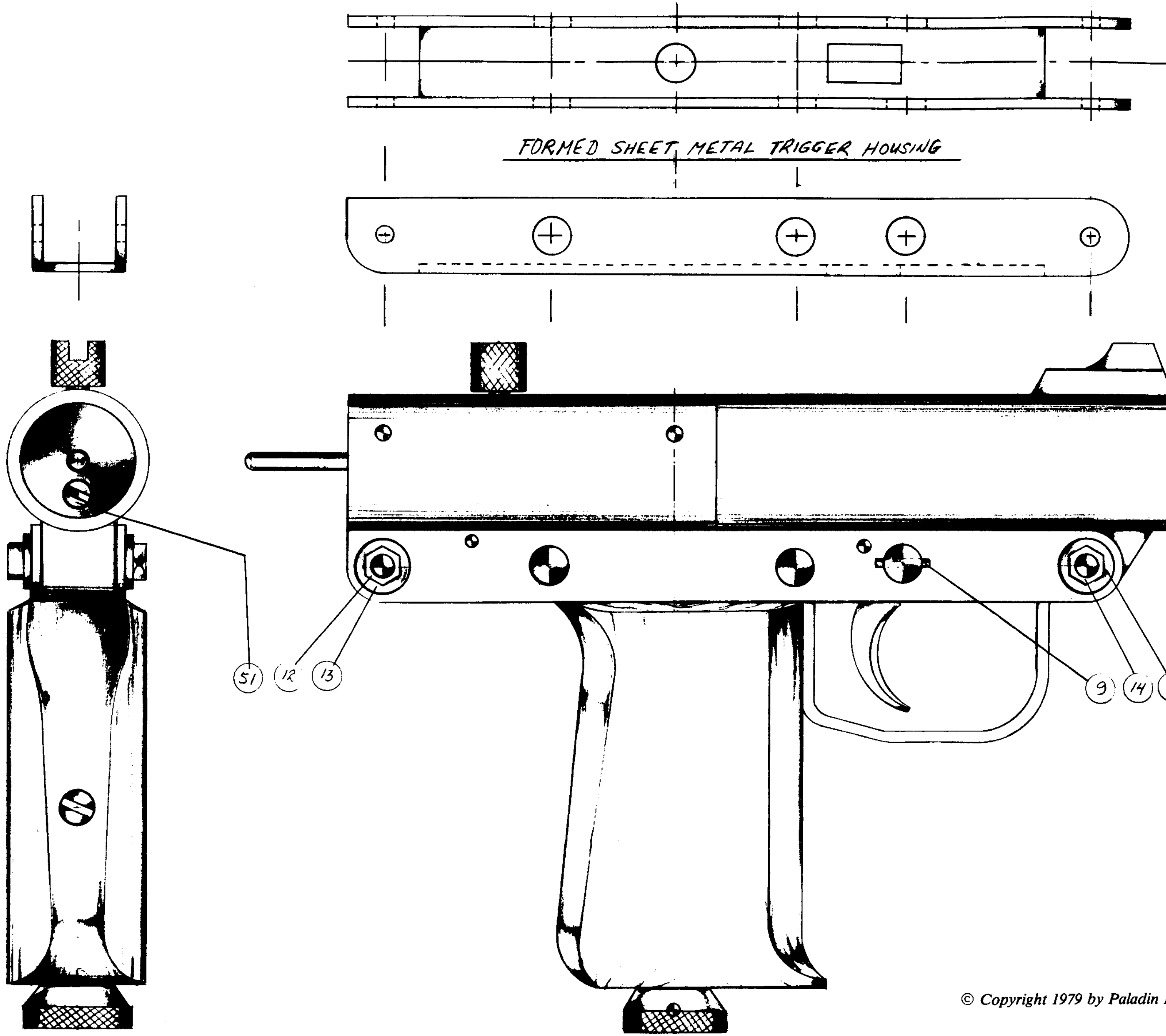
BREECH BLOCK

SHOTGUN PISTOL


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C'BORED CHAMBER
FIRING PIN SPRING
GUIDE BASE (POST)
THREAD FOR RECEIVER
BACK COVER SCREW
THREAD HOLE FOR
COCKING KNOB SCREW
COCKING HANDLE
BOLT
TRIGGER BAR SUPPORT
FIRING PIN


FORMED SHEET METAL TRIGGER HOUSING
51
12
13
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MINI-MAGNUM .22 M.R.F.

SPECIFICATIONS:

CLASSIFICATION .... IMPROVISED - HANDMADE
CALIBRE .... .22 L.R. 22 M.R.F. ADAPTABLE TO VARIOUS PISTOL AMMUNITIONS.
OPERATION .... MANUAL SINGLE ACTION TRIGGER SYSTEM. NO AUTOMATIC EXTRACTOR.
OVERALL SIZE .... DEPENDS ON CALIBRE TYPE USED.

REMARKS: *MANY VARIANTS HAVE BEEN ENCOUNTERED IN VARIOUS CALIBRES.*

SYSTEM OF OPERATION:

To load the weapon, pull the slide to cocked position, then apply the safety by rotating the safety lever upward 90 degrees. The safety lever pin will lock the sear in place. The latch lever located on the right side of the frame has to be rotated 180 degrees towards the thumb. The latch lever pin locks the under lug of the barrel to the frame. The barrel can then be pivoted upward with the left hand into open position exposing the dual chambers, ready for loading.

Since the dual firing pins protrude on the breech block when in the forward position, it is safer to have it in the open cocked position with the safety applied. If the slide is eased forward on a loaded chamber, the firing pins are pressing against the cartridge rims by the pressure of the slide spring, liable to ignite it any time and fire the weapon unintentionally.

There is no built in extractor on the weapon. A separate extractor with double fork type plungers is improvised and can be carried conveniently in the pocket. A pocket clip built in to the extractor holds it in place.

CONSTRUCTION DETAIL:

Every part of this weapon is hand-made. The steel used should be of known analysis, so that the parts can be properly heat-treated before final assembly and use.

The frame sides are constructed from 1/16 inch sheet steel, cut and formed to shape with hand tools. Two separate frame sides are formed. Use 1/4 inch thick steel plate to form the grip base (17), slide spring base (14), breech block (6), and the under lug of the barrel. The trigger guard is made from 1/16 inch thick by 1/4 inch wide steel. If welding equipment is available, braze the grip base, breech block, and trigger guard in place on one frame side. Use rivets for this step if you don't have access to a welding set-up. The other frame side is secured to the receiver body by the barrel pivot screw, and another screw located under the slide just above the grip angle.

Make the slide from 1/16 inch sheet steel. It carries a plate containing the dual firing pins. This plate is secured under the slide by a screw (3), which is positioned to act as a rear sight. The slide spring (13) is a cut-down pistol or revolver hammer spring, available through mail order. It should not be larger than 1/4 inch in diameter to work reliably.

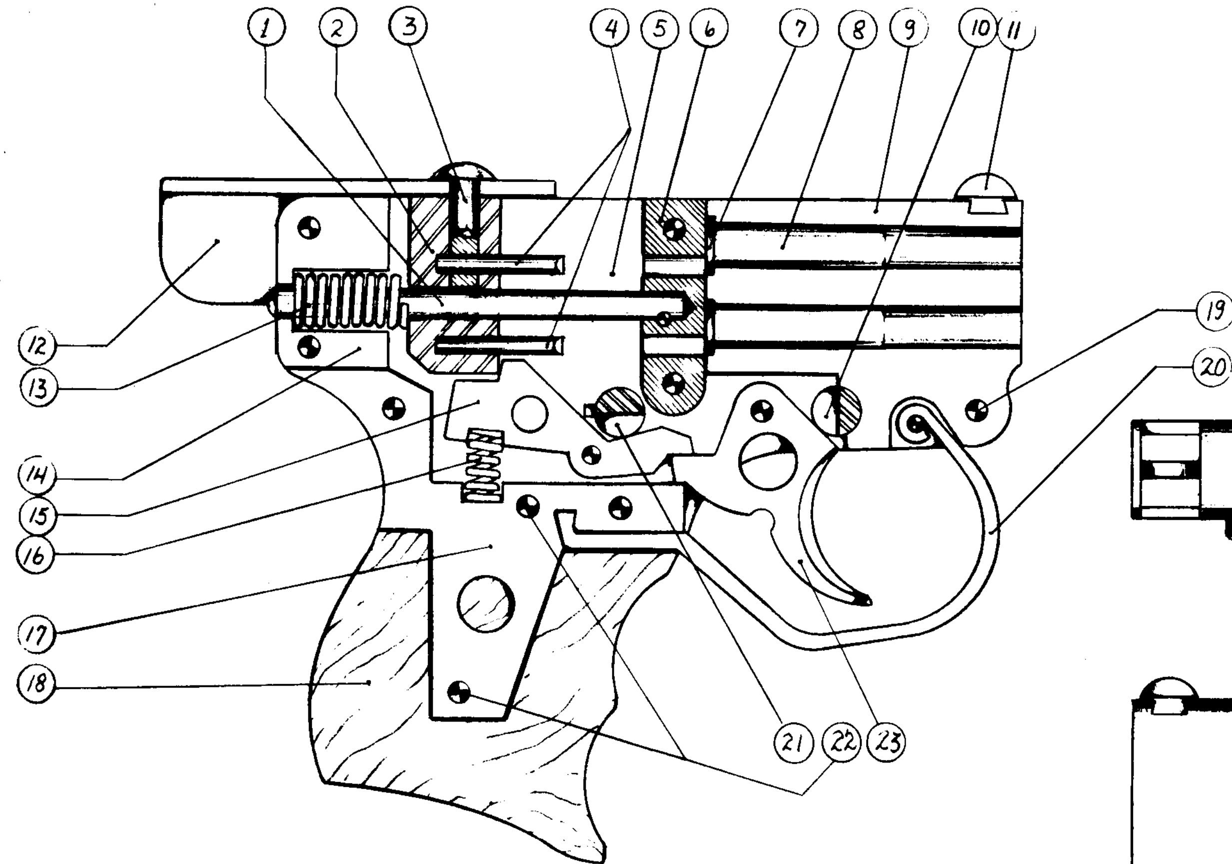
Form a barrel from 1/2 inch thick steel of high quaity. It can either be machined and rifled if you have a machine shop, or hand built, with a smooth bore, if you do not. The barrel's under lug must be 1/4 inch in width, to fit in its space in the frame.

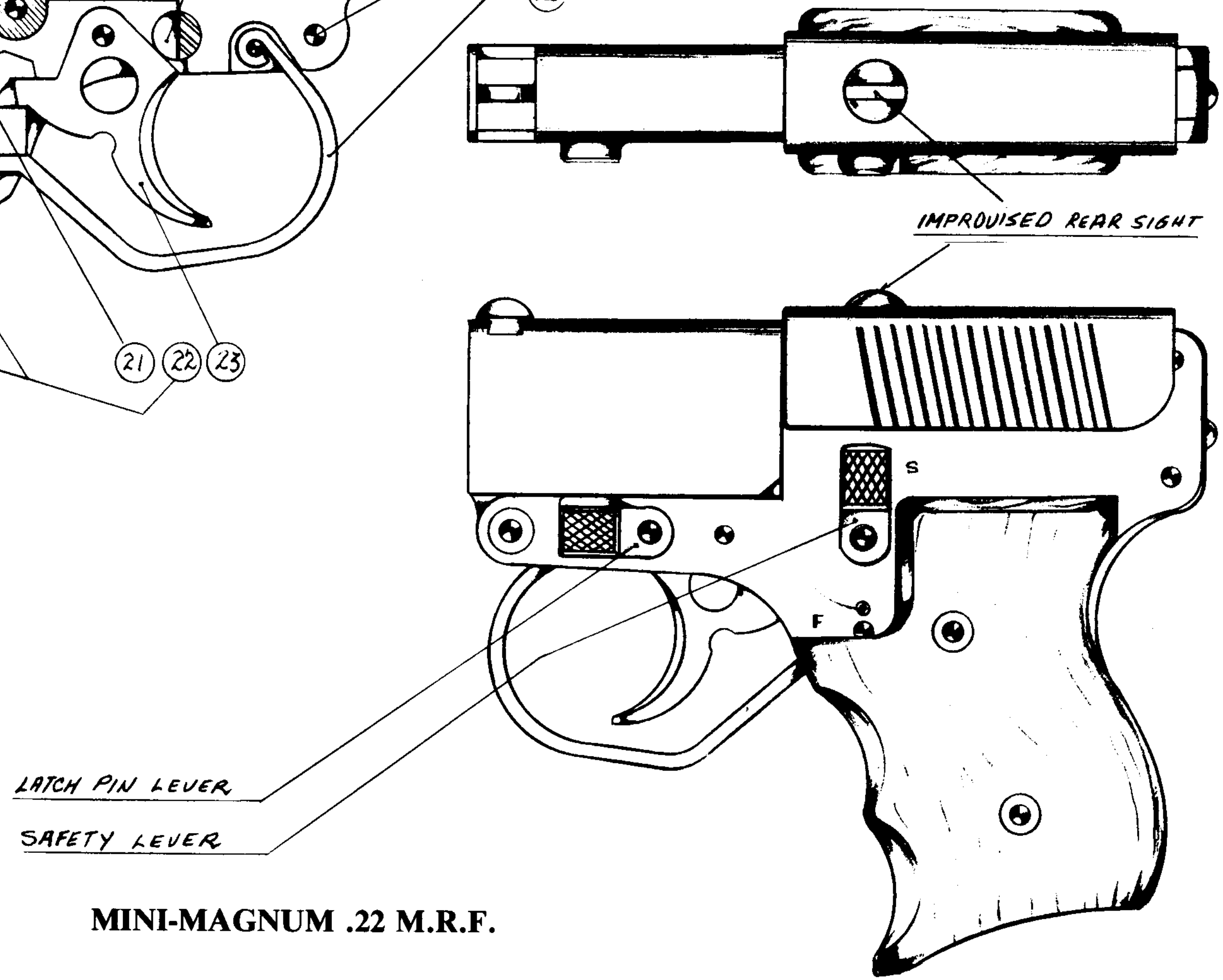
To retain the latch and safety levers in place, spring-loaded index balls must be fitted in them.

The two piece grip can be made from either wood or plastic. Secure it to the grip base by two screws with appropriate nuts on the other stock panel.

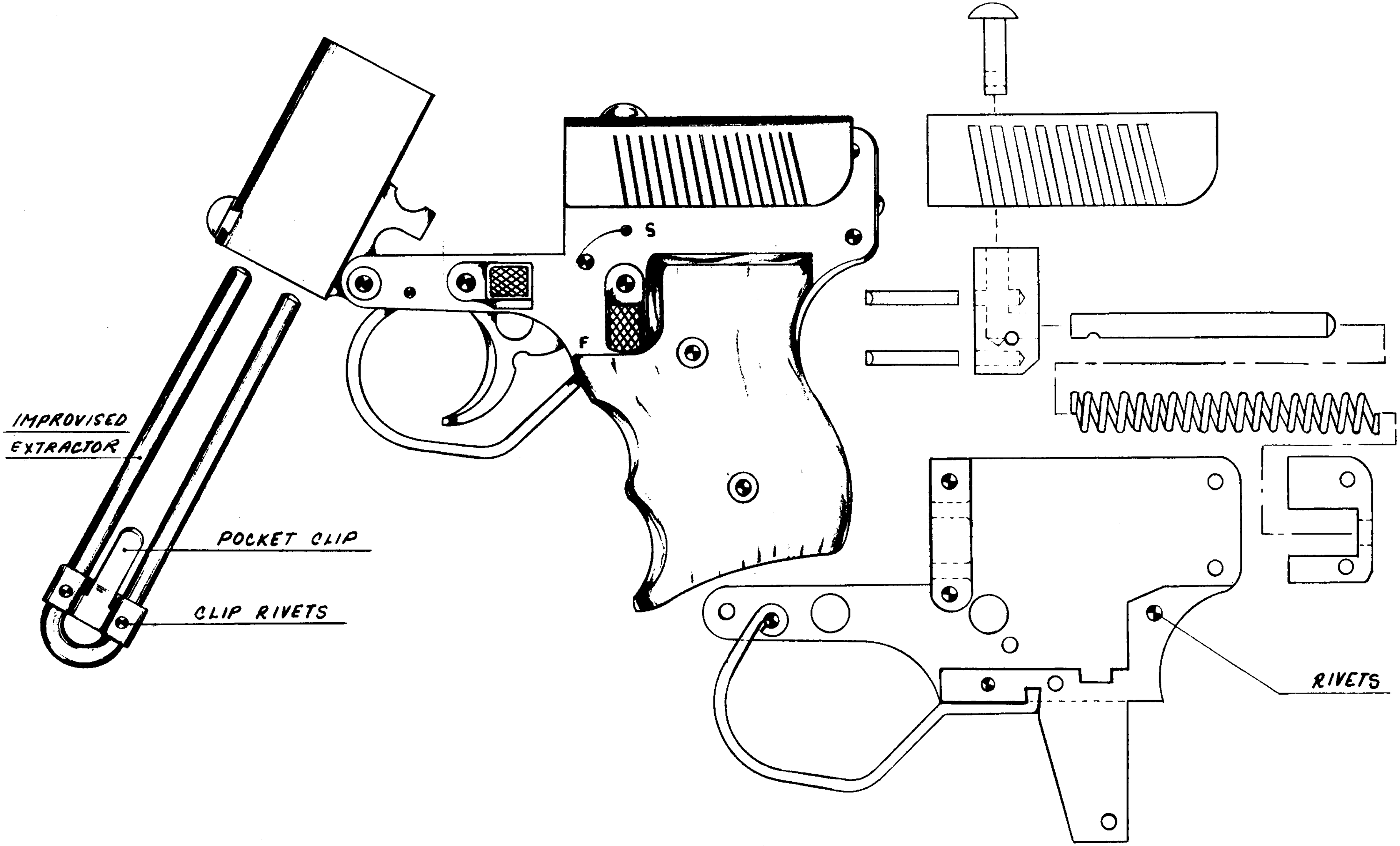
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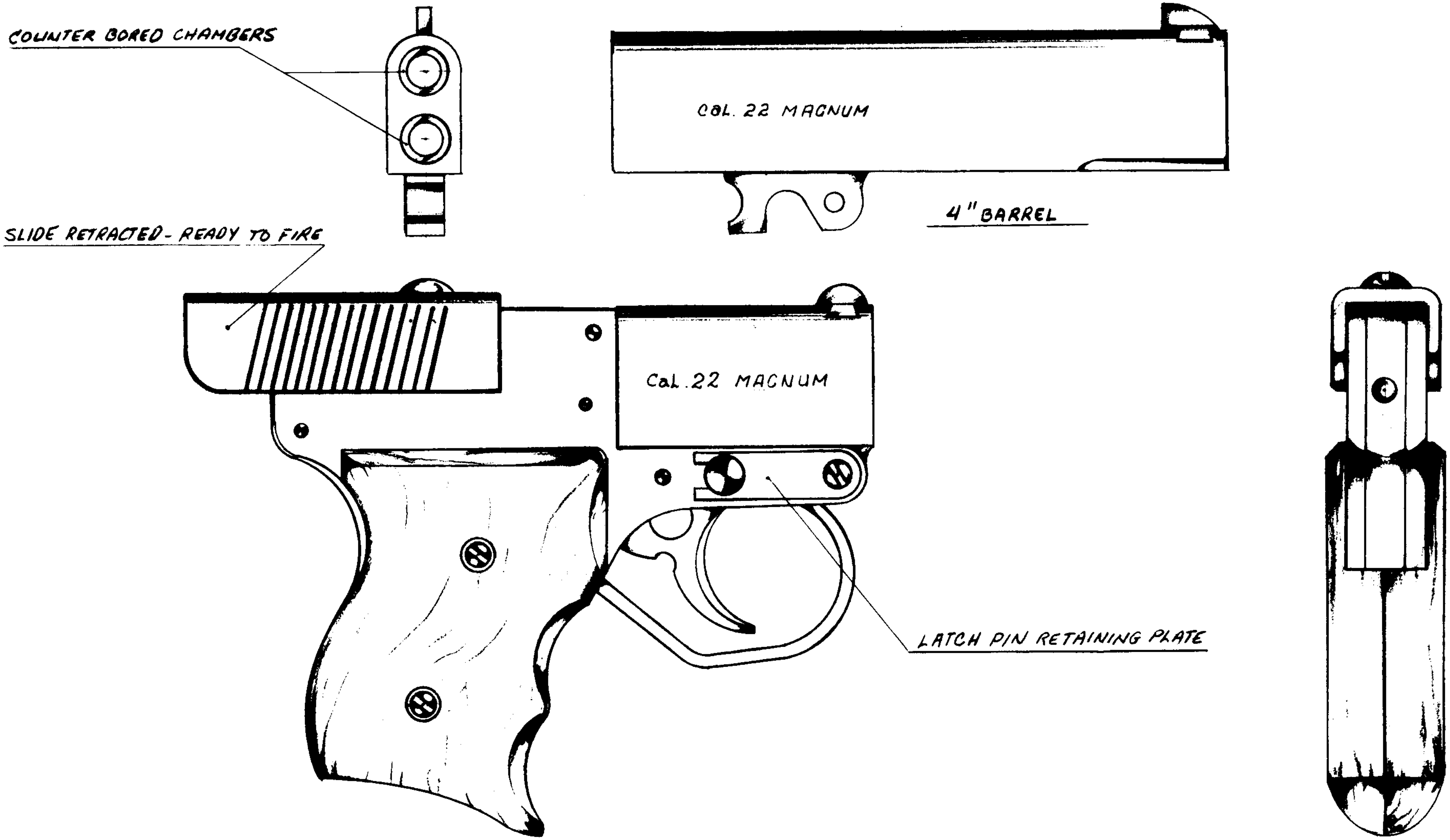
1. *Firing pin base guide rod*
2. *Firing pin base*
3. *Slide retaining pin - pin head slotted as rear sight*
4. *Firing pins*
5. *Side plate (2 pcs.) also receiver body*
6. *Breech block*
7. *Counter bored chambers*
8. *Cal. 22 magnum chamber*
9. *Barrel - no riflings (improvised)*
10. *Barrel latch lever pin*
11. *Front sight*
12. *Slide*
13. *Ignition spring*
14. *Base for ignition spring*
15. *Sear*
16. *Sear spring*
17. *Base for grip stock*
18. *Grip stock - wrap around*
19. *Barrel pivot screw*
20. *Trigger guard*
21. *Safety lever pin*
22. *Stock screws*
23. *Trigger*





MINI-MAGNUM .22 M.R.F.


S
F
IMPROVISED
EXTRACTOR
POCKET CLIP
CLIP RIVETS
RIVETS


COUNTER BORED CHAMBERS
COL. 22 MAGNUM
4" BARREL
SLIDE RETRACTED - READY TO FIRE
Cal. 22 MAGNUM
LATCH PIN RETAINING PLATE

HECKLER & KOCH MODEL 91 & 93

SPECIFICATIONS:

H & K 91	308 CAL.
H & K 93	223 CAL.
CAPACITY (H & K 91)	20 ROUND MAGAZINE
(H & K 93)	20, 40 ROUND MAGAZINE
TYPE OF FIRE	SELECTIVE - SEMI AND FULL AUTOMATIC

REMARKS: *ORIGINALLY MANUFACTURED AS CIVILIAN SEMI-AUTOMATIC VERSION OF G3 AUTOMATIC RIFLES MADE IN WEST GERMANY. VARIETY OF ACCESSORIES SUCH AS TELESCOPING STOCK, BIPOD, SCOPE MOUNTS, ETC., AVAILABLE.*

LOADING, UNLOADING, AND FIRING:

Loading, unloading, and firing the converted model are accomplished in the same way as on the semi automatic system. The only different factor is that the weapon now has the provision for full automatic firing.

NOTE: THE ORIGINAL FACTORY SAFETY LEVER IS NOW REPLACED WITH AN IMPROVISED SAFETY-SELECTOR TYPE LEVER THAT HAS A CLEARANCE NOTCH TO BYPASS THE INDEX RAIL BLOCK OF THE GRIP FRAME. THIS WILL ENABLE THE NEW SELECTOR LEVER TO BE ROTATED FULLY DOWNWARD AS WITH ITS MILITARY COUNTERPART SELECTOR SETTING.

THE NEW IMPROVISED SELECTOR LEVER AND ITS FUNCTION:

The selector lever has a three position setting: SAFE, SEMI, and FULL AUTOMATIC. With the selector set on its upward most position, the trigger is locked and cannot be pressed.

SEMI AUTOMATIC FUNCTIONING: Set the selector to the middle notch to make the weapon function in the semi-automatic mode. The trigger must be released after each shot for successive shots, until the magazine is empty.

FULL AUTOMATIC FUNCTIONING: Set the selector to its lowest (third) notch setting to function on full automatic. In this position the deep notch of the selector pin permits the trigger to overtravel, thereby preventing the sear from catching the hammer notch during bolt recoil. The hammer will then move with the bolt during its rearward and forward recoil, firing the cartridge in the chamber as soon as the bolt closes fully. At this time the locking rollers are fully in. The firing pin will not hit the cartridge primer if the bolt is not fully locked via the rollers. This operation is continued until the trigger is released or the magazine empty.

THE CONVERSION TECHNIQUE:

The original models are manufactured as semi-automatic rifles only. Necessary modifications have been undertaken by the manufacturer to ensure that the commercial variants cannot be converted to full automatic, even by substituting its military trigger mechanism. The bolt on the military models has a tripping shoulder to operate the safety sear mechanically during bolt closing. On the civilian model this shoulder has been fully machined, and therefore will not function even if the military trigger mechanism is substituted for the commercial trigger housing and frame.

The grip frame with the stock has only two settings on its index rail: SAFE and FIRE. Further downward movement is blocked by rail indentation.

The trigger housing body that contains the trigger mechanism has a built in trigger block in the form of a sturdy pin brazed to the right side of the frame. This is another factor that prevents the trigger from overtraveling for full automatic functioning. This pin can be removed by simply drilling through it or filing it with a needle file from the inside. The entire trigger mechanism must first be removed before removing the block pin. Once this pin is removed, the trigger can overtravel far enough to not engage with the hammer notch when fully pressed. This is the full automatic setting.

THE REPLACEMENT SELECTOR LEVER DETAIL:

High quality steel plate 1/2 inch thick is used. The style and pattern of the original lever can be copied. It will contain an index ball with a strong spring for positive indexing. (Refer to diagram for a selector lever sample construction.) The lever should have a clearance notch to bypass the index rail block when set to full automatic.

The selector pin should be perfectly dimensioned from the original lever pin to ensure positive fit and operation.

THE GRIP STOCK FRAME DETAIL:

Since the grip frame has been fitted with a new selector lever, new index holes for types of fire setting must be drilled, preferably between the original index rail and selector lever pin hole.

To calculate the new index hole, install the new selector lever (completely assembled with its index ball and spring in place and appropriate pin notches) to the grip housing with the trigger mechanism unit inside. Set the selector lever on the safe position as with the original safety lever position. Remove the selector lever and mark the end of the index ball travel. Rotate the selector to the semi automatic setting. Cock the hammer by hand and press the trigger. The hammer should be released when the trigger is pressed in this position. Retain pressure on the trigger and re-cock the hammer. The hammer should engage with the sear while the trigger is pressed. Release the trigger and press again. The hammer should be released once the trigger is pressed. Again mark the end of the index ball travel with a scribe for the semi-automatic notch.

After the semi-automatic notch has been calculated, press the selector down while pressing the trigger until the trigger reaches the deep notch of the selector pin. Cock the hammer while pressing the trigger to see if it still engages with the sear. If it does, deepen the selector pin notch until the sear has enough clearance not to engage with the hammer. Mark the index ball end travel for the full automatic index notch.

Remove the selector and drill a 1/16 inch hole at the marked index location; DO NOT DRILL THROUGH.

NOTE: TO AVOID A MISTAKE, REPEAT THE PROCEDURE OF CALCULATING THE PRECISE INDEX HOLES UNTIL FULLY SATISFIED. THIS IS THE TRICKY PART OF THE JOB.

NOTES FOR HECKLER & KOCH 91 & 93 AUTOMATIC CONVERSION

Both the H & K 91 and 93 are civilian models designed primarily for semi-automatic functioning, utilizing different bolts than the military models. In the civilian version, the disconnecting shoulder of the bolt is machined to prevent operation of the automatic sear release lever. The trigger housing is also modified to conform with the semi automatic trigger mechanism. The grip frame containing the trigger housing unit is also different, most notably in the safety indexing rail for fire setting. In the military model, there are three index notches. The third notch is for the full automatic mode of fire. The latest military model from H & K features four notches, one of which is the three round burst setting that permits only three shots to be fired when the trigger is held back.

Both the H & K 91 and 93 have only two index settings. The settings are "SAFE" and "FIRE," and function solely in the semi-automatic mode. The safety index rail has a protruding indentation to block the safety from moving further downward.

The mere substitution of the selective military trigger mechanism will not convert the weapon to selective fire functioning, since the disconnecting shoulder of the bolt has been machined. It is therefore necessary to modify the bolt by copying the military type, or replace it with a military bolt that has an un-machined disconnecting shoulder.

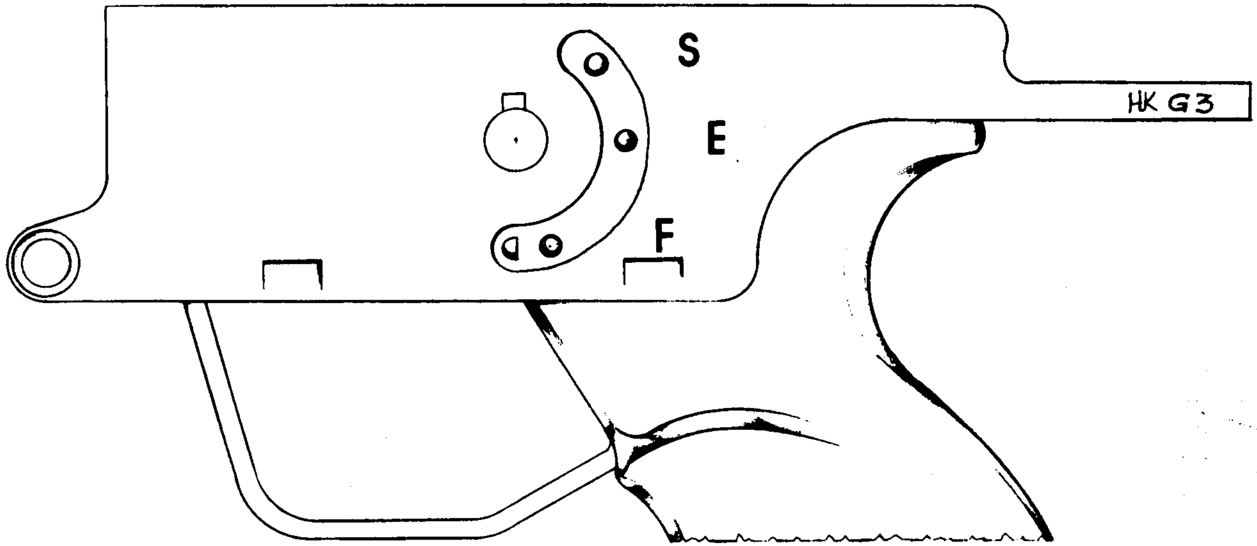
Even if the bolt has been replaced and a military trigger mechanism installed, the weapon will still not function in the selective mode, because of the index rail block on the grip frame. A pin brazed to the trigger housing (inside) also prevents further trigger pull to disengage the trigger completely from the hammer notch. The sear is mounted to the trigger.

To convert both models (H & K 91 and 93) to fire semi or full automatic selectively, both the trigger block (pin brazed inside the trigger housing) and safety lever index rail block must be removed.

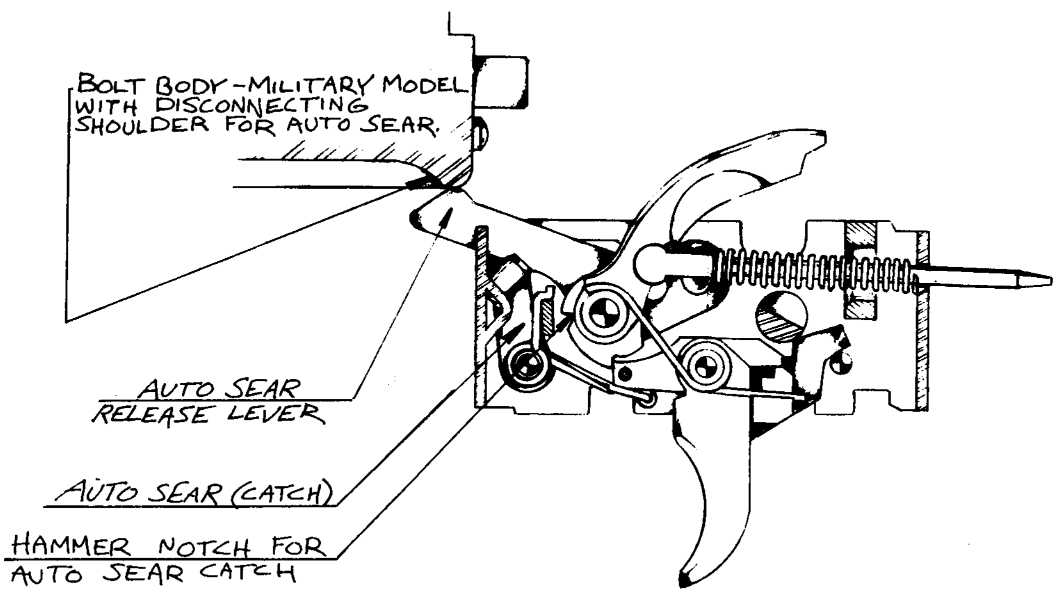
Once the trigger block is removed the weapon will fire full automatic without installing the safety lever, since the trigger can now be pulled out of engagement with the hammer notch.

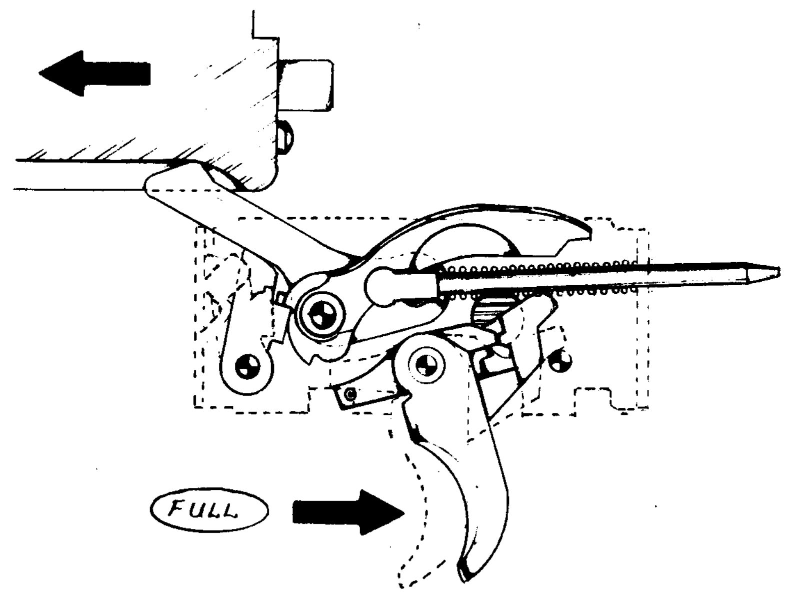
To make the weapon fire selectively, a new safety selector lever must be built. New, repositioned index holes should be drilled with three settings, like its military counterpart. The safety index rail guide block must be filed, or (to retain original appearance) a clearance cut under the new selector lever to over pass the index block. This will give the grip frame untouched appearance, especially if the new selector lever covers the new index holes.

This is the simplest and most efficient selective fire conversion. It would be very costly to convert the weapon to selective fire by adding hard to get military mechanisms. The locking system also contributes to its functional efficiency, since the firing pin cannot activate the cartridge primer until the locking rollers are fully housed. In full automatic mode the converted model functions similarly to the MG-34 machine gun, with a very high rate of fire.

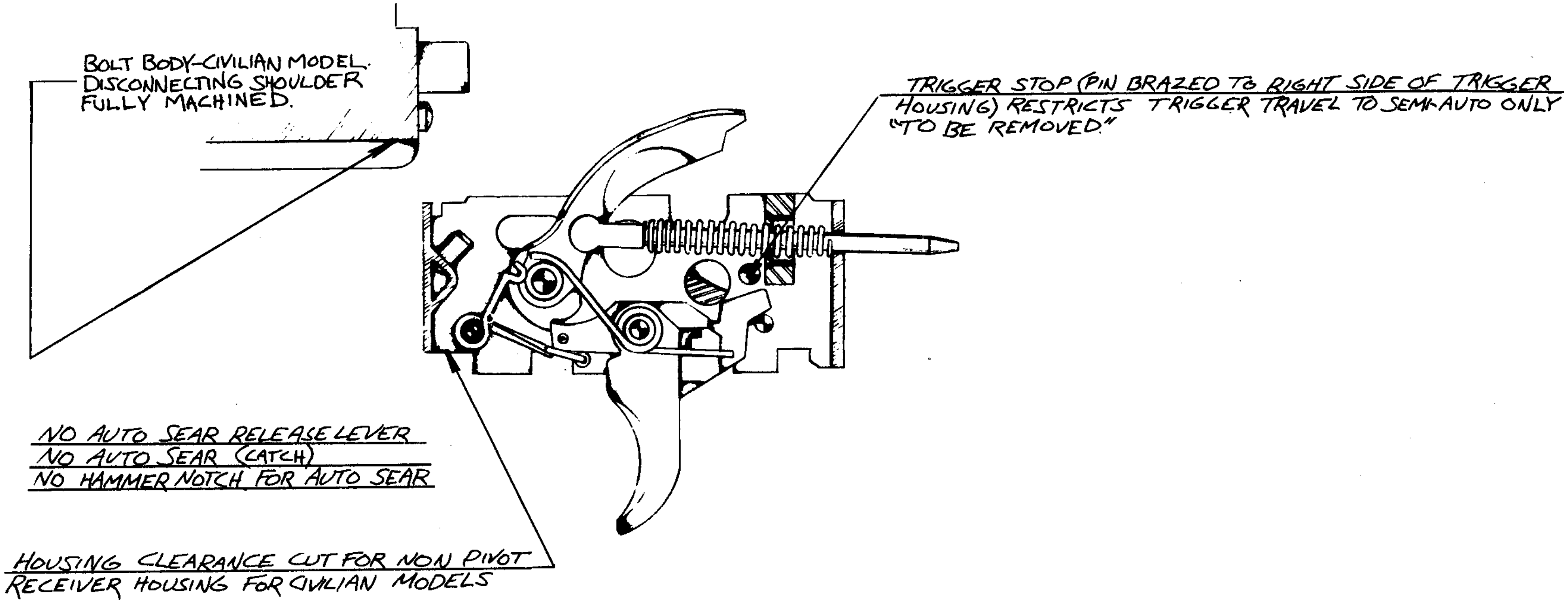


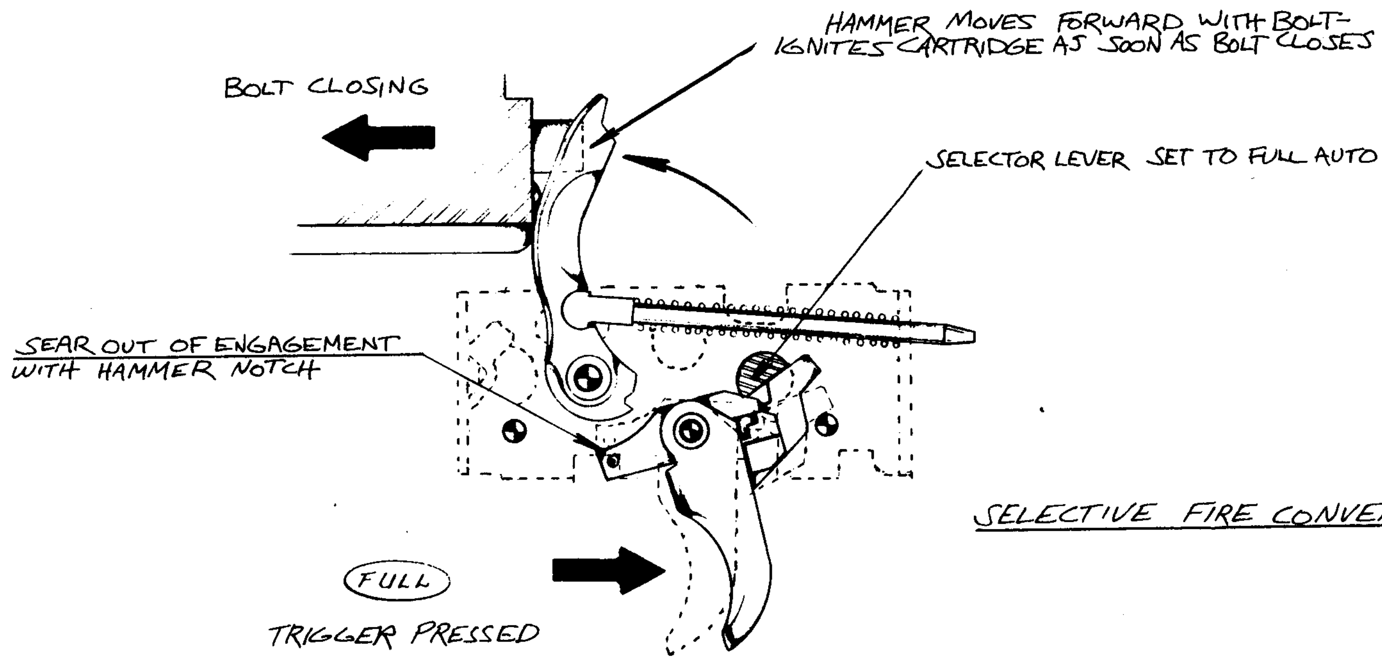
ORIGINAL MILITARY MODEL



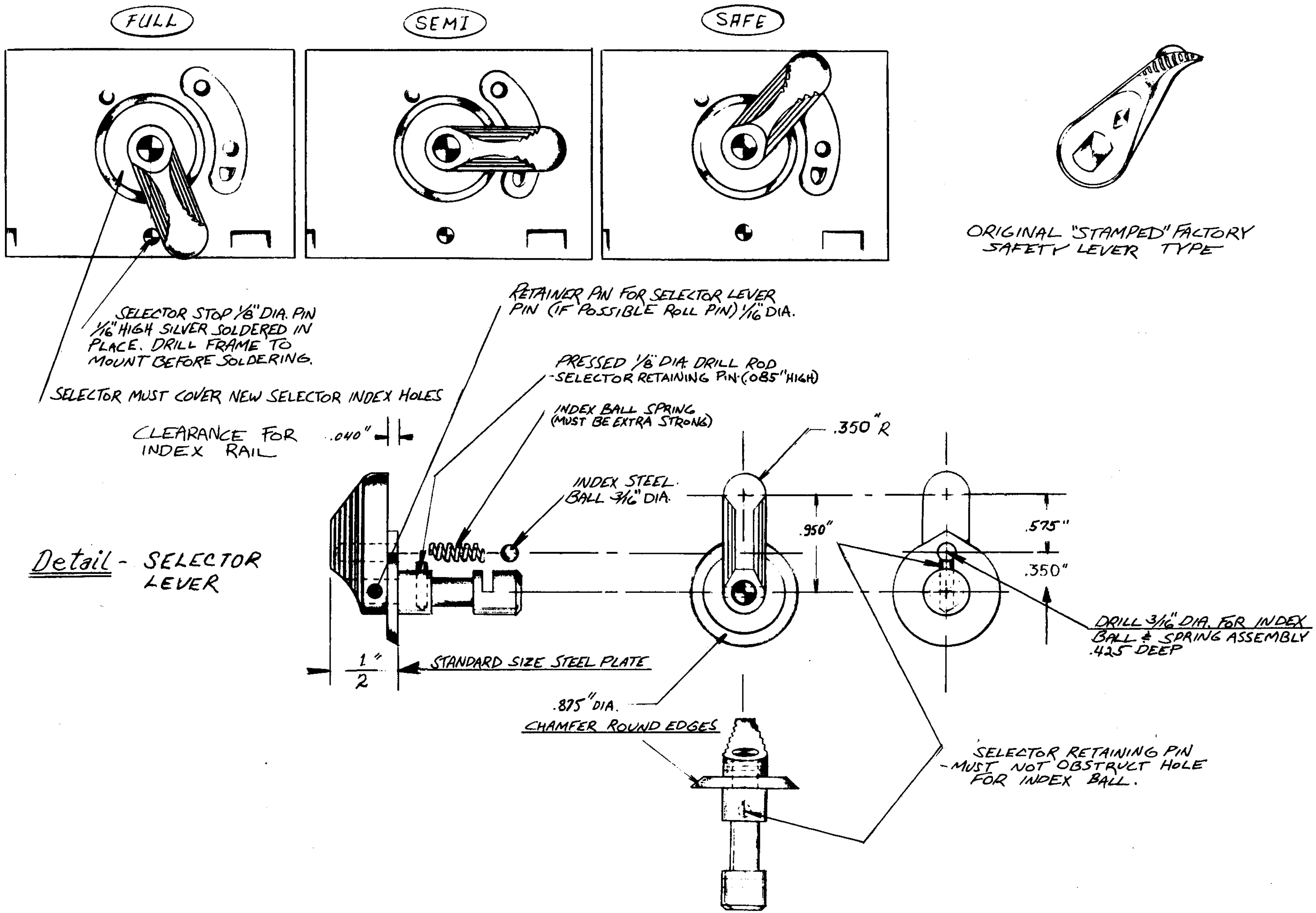


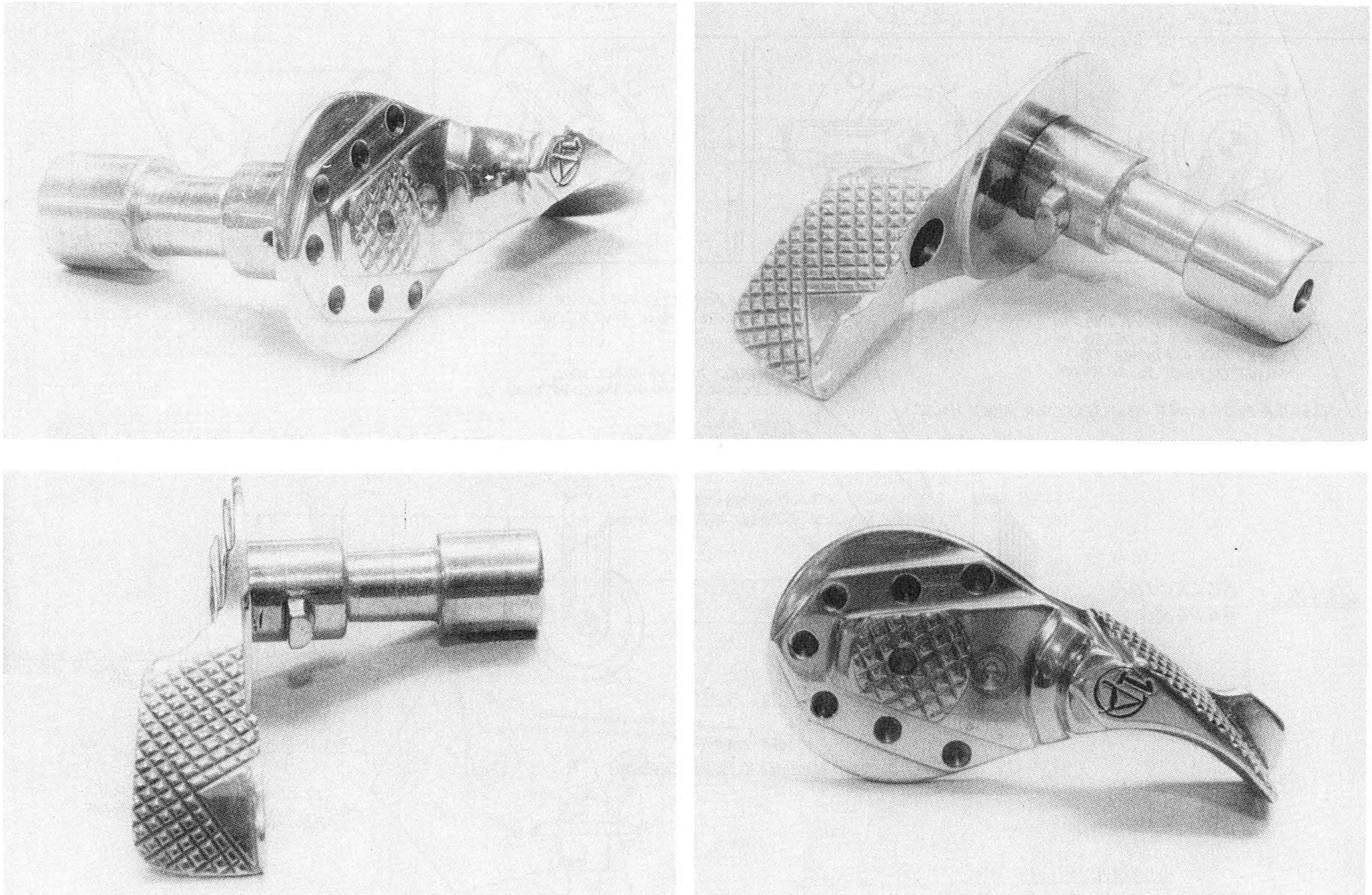
HECKLER & KOCH MODEL 91 & 93



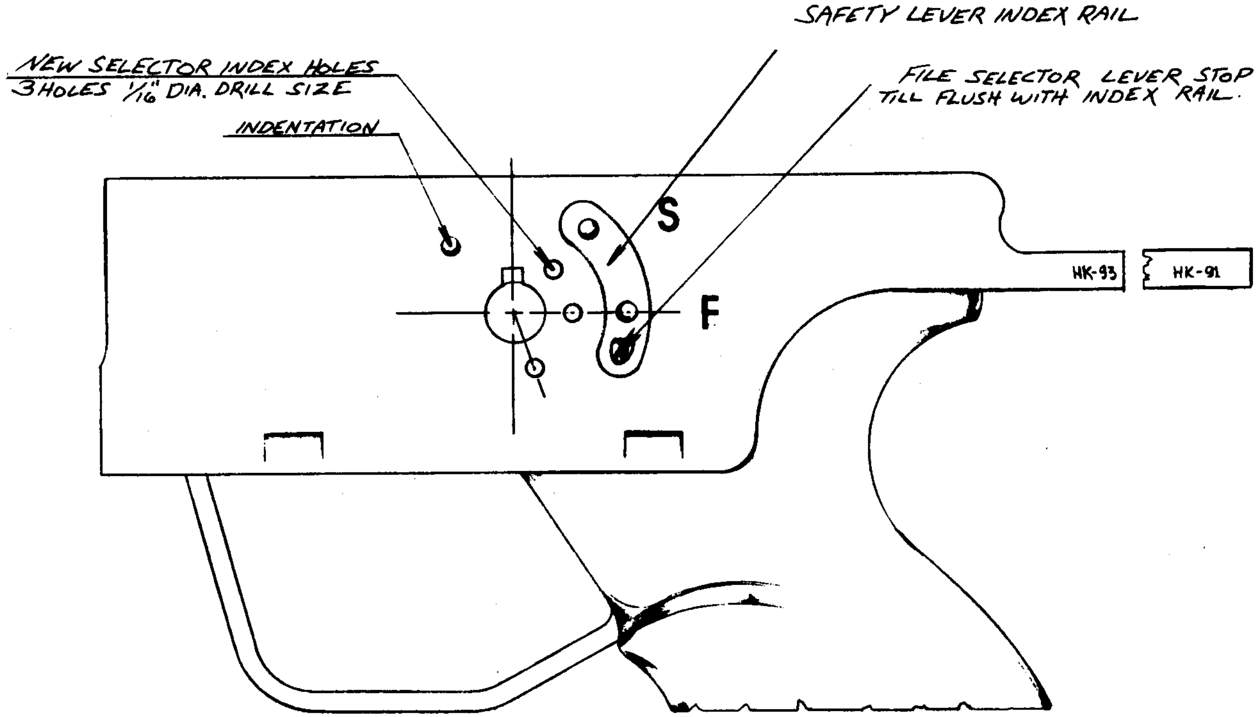


SELECTIVE FIRE CONVERSION

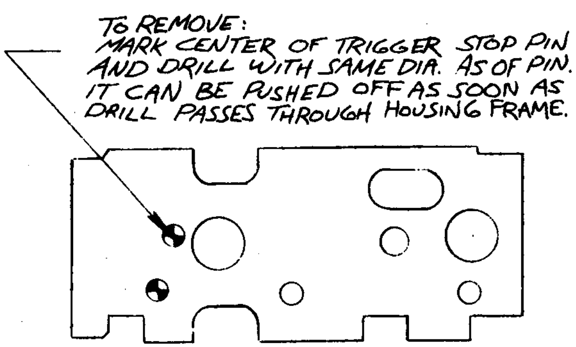

FULL
SEMI
SAFE
ORIGINAL "STAMPED" FACTORY SAFETY LEVER TYPE
SELECTOR STOP 1/8" DIA. PIN 1/16" HIGH SILVER SOLDERED IN PLACE. DRILL FRAME TO MOUNT BEFORE SOLDERING.
SELECTOR MUST COVER NEW SELECTOR INDEX HOLES
RETAINER PIN FOR SELECTOR LEVER PIN (IF POSSIBLE ROLL PIN) 1/16" DIA.
PRESSED 1/8" DIA. DRILL ROD -SELECTOR RETAINING PIN (.085" HIGH)
INDEX BALL SPRING (MUST BE EXTRA STRONG)
CLEARANCE FOR INDEX RAIL
.040"
INDEX STEEL BALL 3/16" DIA.
.350" R
.950"
.575"
.350"
Detail - SELECTOR LEVER
DRILL 3/16" DIA. FOR INDEX BALL & SPRING ASSEMBLY .425 DEEP
1"/2
STANDARD SIZE STEEL PLATE
.875" DIA.
CHAMFER ROUND EDGES
SELECTOR RETAINING PIN - MUST NOT OBSTRUCT HOLE FOR INDEX BALL.



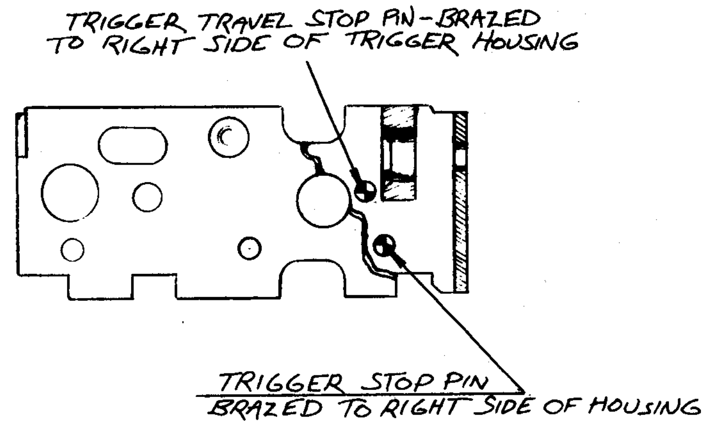
Four views of an unfinished improvised selector lever for the Heckler & Koch Model 91 & 93 selective fire conversion.



RIGHT SIDE



LEFT SIDE



TRIGGER HOUSING DETAIL

MINI MACHINE PISTOL

SPECIFICATIONS:

CLASSIFICATION .... IMPROVISED
CALIBRE .... .22 L.R. OR .22 SHORT, ADAPTABLE
OPERATION .... FULL AUTOMATIC ONLY
CAPACITY .... 8, 15 SHOTS. MODIFIED AR-7 EXPLORER MAGAZINES ARE USED. (OTHER MAGAZINES ADAPTABLE)
OVERALL LENGTH. . . DEPENDS ON BARREL LENGTH

REMARKS: USUALLY ENCOUNTERED IN DIFFERENT STYLES AND CALIBRES.

SYSTEM OF OPERATION:

The weapon operates on a simple blow back principle. The bolt is drawn to the rear by its grasping lug, fastened to the rear end of the bolt. The bolt will be held in open position by the sear. The sear engages the bolt face and holds it this way until the trigger is pressed. When the trigger is pressed, the bolt moves forward, picks up a round, loads it into the chamber, and fires it. The system ensures that the cartridge has been fully housed into the chamber before the hammer hits the firing pin. The underside portion of the hammer will press against the rear of the receiver tube where the bolt is contained during the last 1/16 inch of the bolt closing. This contact of the hammer and receiver is transmitted to the firing pin, igniting the cartridge. The weapon will continue full automatic fire until the trigger is released or the magazine empty.

CONSTRUCTION DETAIL:

The receiver is a simple square tube 1 1/8 x 1 1/8 inch or larger, depending on the size of the weapon or calibre. Slots to accommodate the magazine, ejection slots, and a slot for the recoil control screw head are cut. The recoil control screw prevents further backward pressure of the slide during operation, because the recoil spring may not have sufficient strength to stop overtravel of the bolt. This screw will also prevent the bolt from flying out of the receiver if the recoil spring guide nut accidentally disconnects from the bolt. The recoil spring is a cut down M1 carbine recoil spring. (Any similar spring used in .22 autos will do). It is housed in a hole just above the muzzle hole and is integrally drilled to the barrel stock.

The trigger housing and magazine housing are both formed from 1/16 inch steel sheet and brazed or riveted together in place to form a simple frame.

The magazine used is from the AR-7 Explorer .22. It is best suited because of its built in feed ramp. This means that the barrel can be built easier without the provision for feed ramp. If the 15 shot magazine is to be used, file a notch aligned to the magazine catch with the magazine fully inserted. File the magazine hump on the right side of the magazine body so it can be inserted freely into the magazine housing.

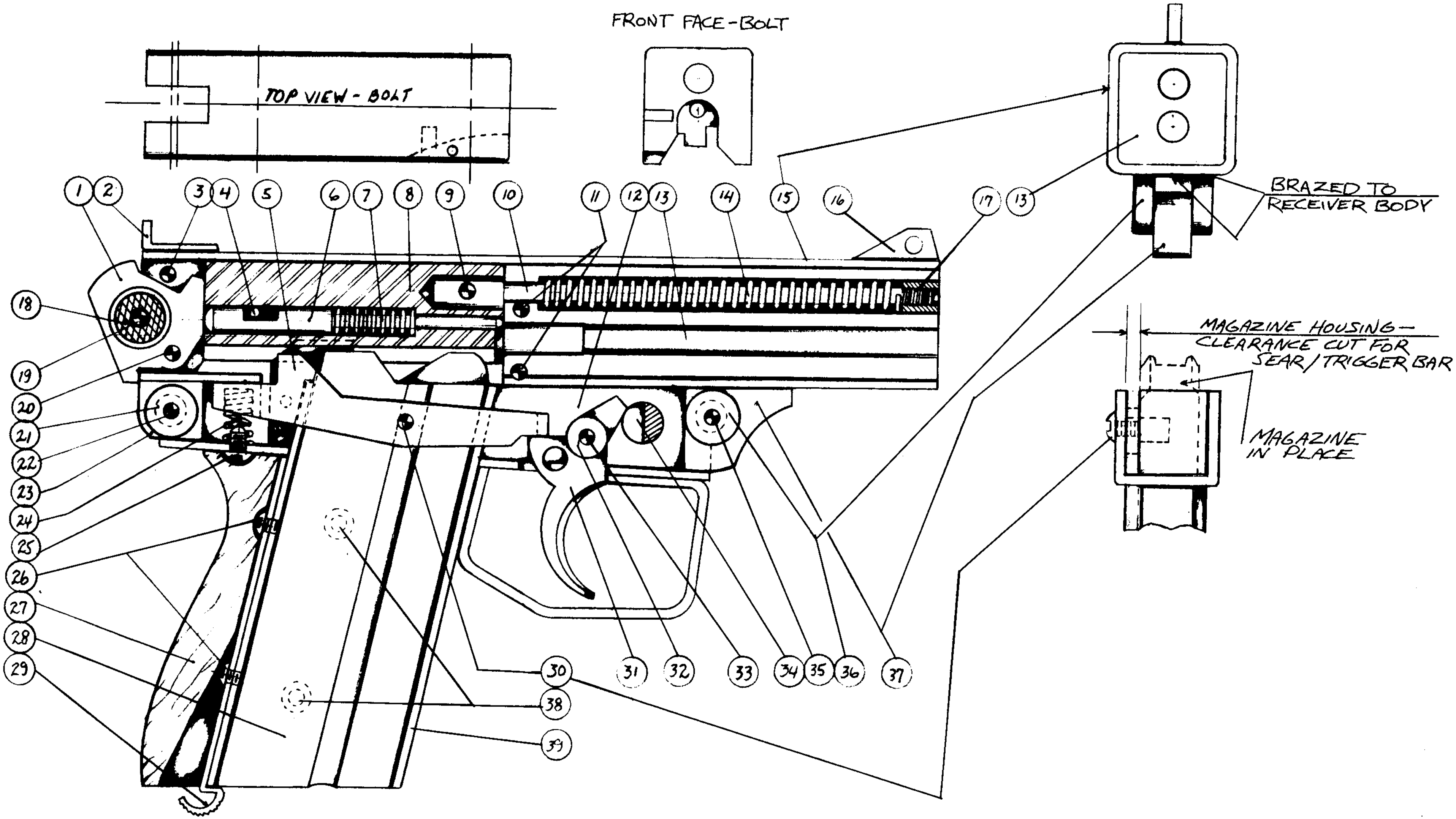
The ejector can be riveted or brazed to the left side of the receiver only. This will permit a cut out or clearance to be cut on the right side of the magazine housing before riveting or brazing it to the trigger housing. This clearance cut will accommodate the sear. The sear is held in place by a screw which is connected to the right side of the trigger housing frame only.

The safety lever is retained by a plate on the right side of the trigger housing and in turn secured by the barrel pivot screw nut. The lever contains the index ball and spring for type of fire setting.

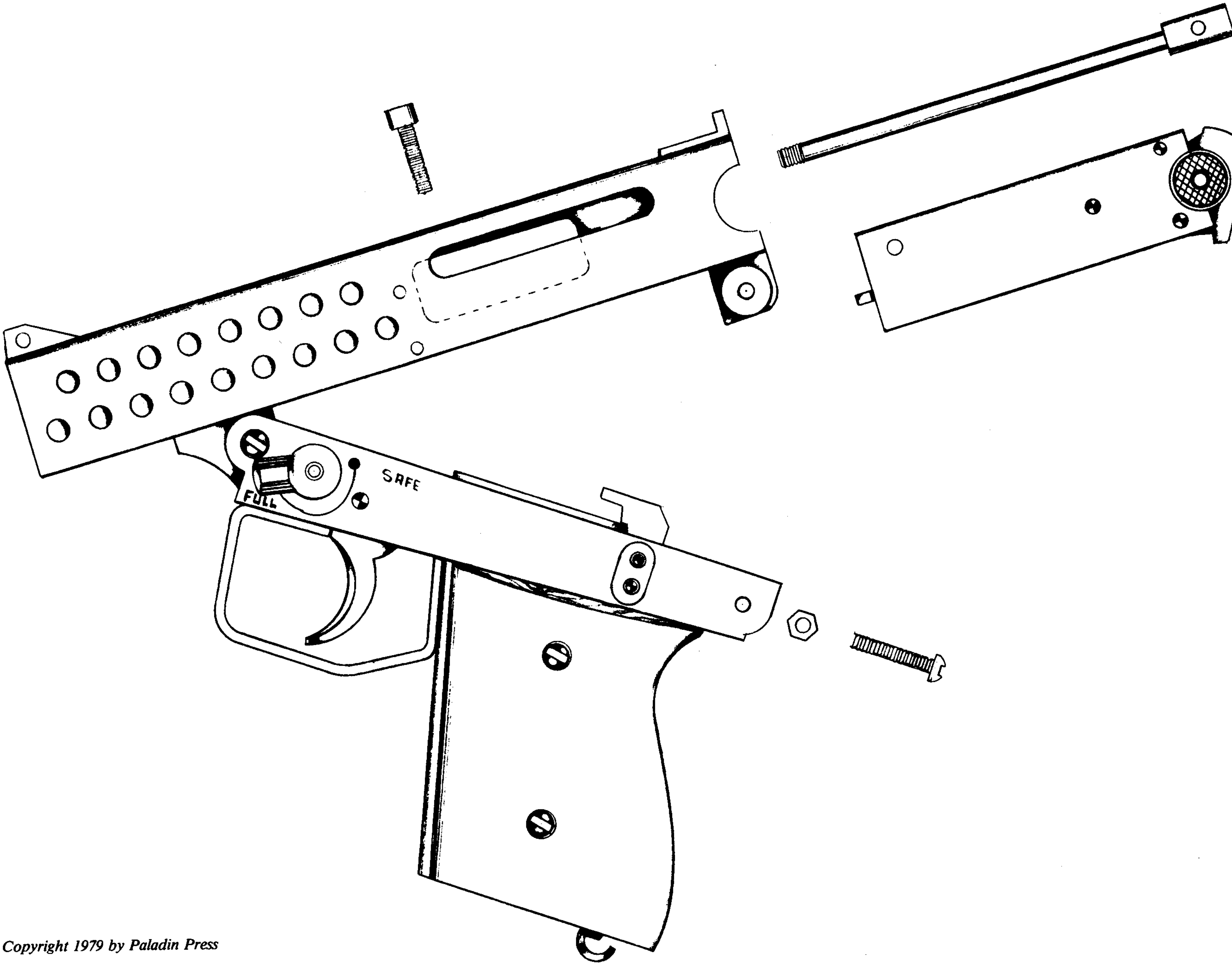
Two lugs are brazed to the front and rear underside of the receiver tube to connect the receiver to the trigger housing. Both lugs (if possible) must be as thick as the width of the magazine housing. This eliminates the use of washers to conform with the space inside the housing. A spacer can be used on the trigger since the most practical trigger thickness is 1/4 to 3/8 inch.

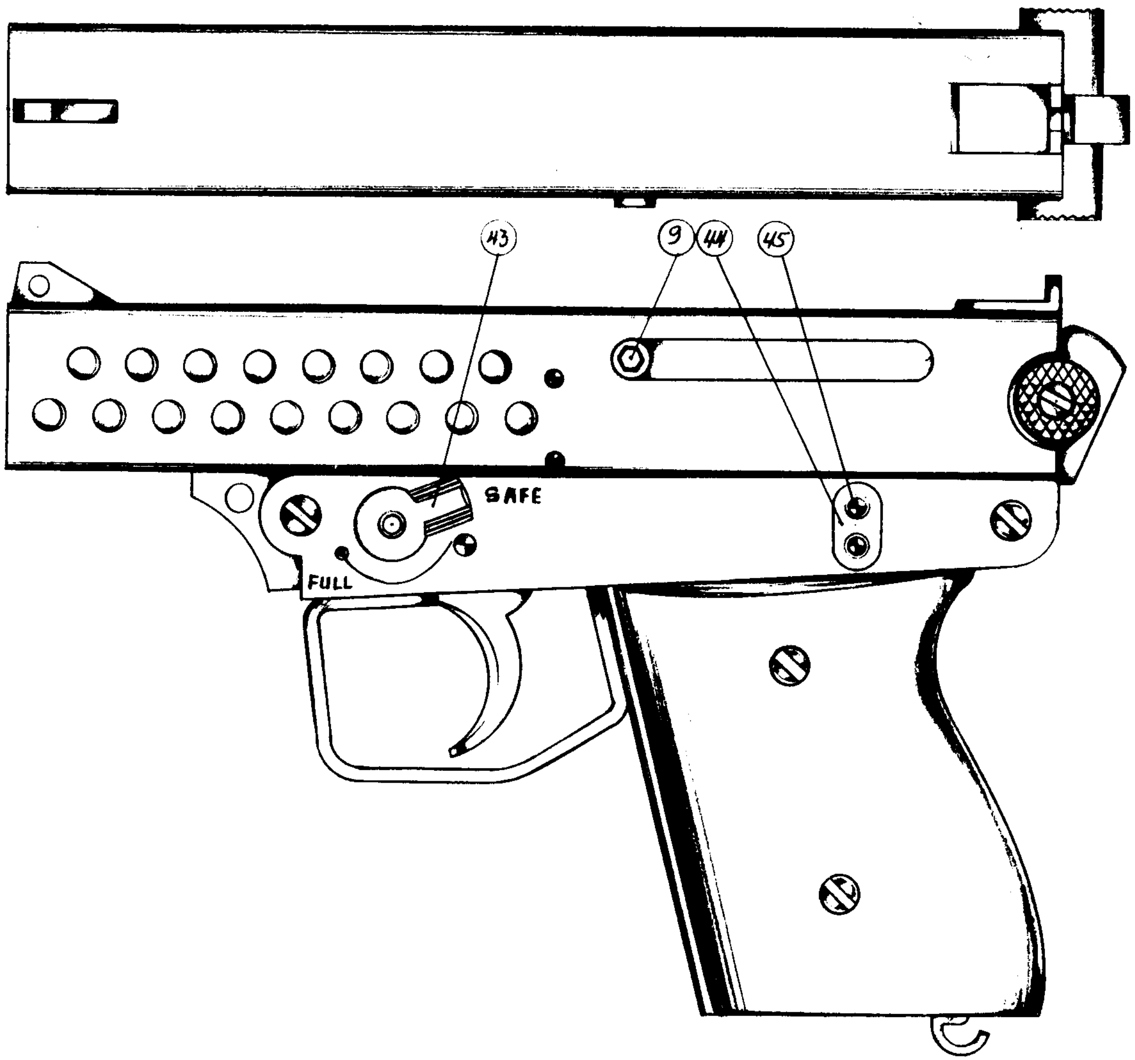
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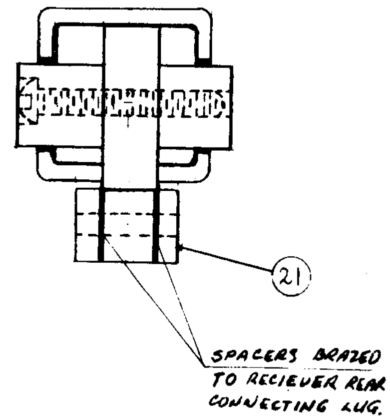
1. *Hammer*
2. *Rear sight (brazed on top of receiver)*
3. *Hammer stop pin*
4. *Firing pin retaining pin*
5. *Sear bar*
6. *Firing pin*
7. *Firing pin spring*
8. *Bolt*
9. *Recoil spring guide retaining screw / recoil stop screw*
10. *Recoil spring guide*
11. *Barrel retaining pins*
12. *Trigger housing*
13. *Barrel*
14. *Recoil spring (cut down M1 carbine recoil spring)*
15. *Receiver (square tubing)*
16. *Front sight - brazed to receiver*
17. *Recoil spring guide nut*
18. *Grasping bolts*
19. *Grasping bolt retaining screw*
20. *Hammer pin*
21. *Rear connecting lug spacers - brazed to lug & receiver*
22. *Connecting lug screw*
23. *Connecting lug (rear of receiver) brazed to receiver body*
24. *Sear spring*
25. *Sear spring retaining screw*
26. *Magazine catch retaining screw*
27. *Grip stocks (wrap around type)*
28. *Magazine (std. 8 rds. AR - 7 Explorer .22 cal) also 15 shots now available.*
29. *Magazine catch - flat type*
30. *Sear pivot screw (screwed on to trigger housing only)*
31. *Trigger*
32. *Spacers for trigger (steel washers)*
33. *Trigger pin*
34. *Safety pin*
35. *Barrel pivot screw*
36. *Spacers for front lug (brazed to lug)*
37. *Connecting lug (front of receiver) brazed to receiver body*
38. *Stock screws (4 pcs.)*
39. *Magazine housing (brazed to trigger housing & trigger guard)*
40. *Extractor spring*
41. *Extractor*
42. *Ejector*
43. *Safety lever*
44. *Plate for ejector pins*
45. *Ejector retaining pins (riveted to plate)*

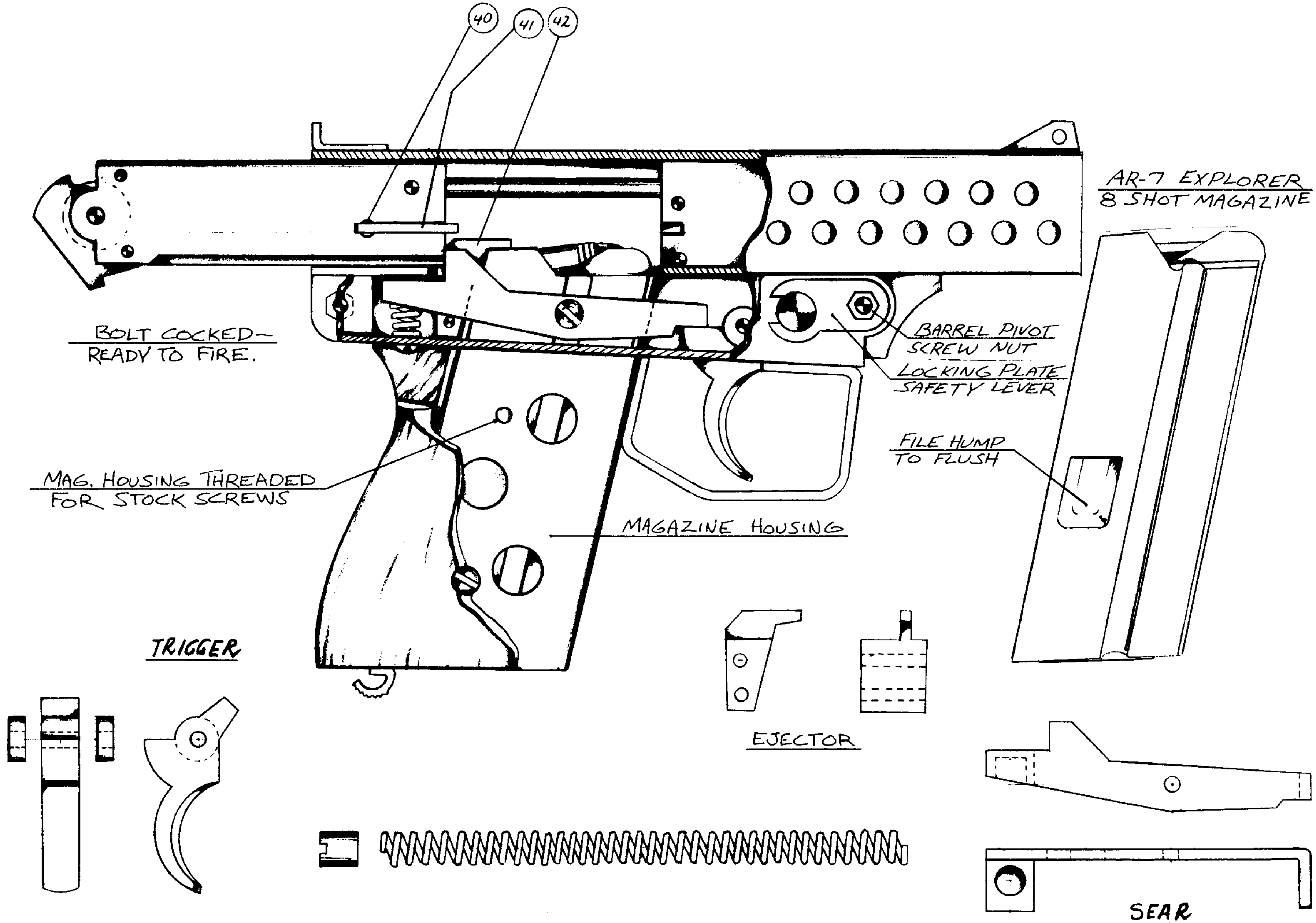


MINI MACHINE PISTOL


SAFE
FULL


43
9
44
45
SAFE
FULL


21
SPACERS BRAZED
TO RECIEVER REAR
CONNECTING LUG.


40
41
42
AR-7 EXPLORER
8 SHOT MAGAZINE
BOLT COCKED—
READY TO FIRE.
BARREL PIVOT
SCREW NUT
LOCKING PLATE
SAFETY LEVER
FILE HUMP
TO FLUSH
MAG. HOUSING THREADED
FOR STOCK SCREWS
MAGAZINE HOUSING
TRIGGER
EJECTOR
SEAR

WINCHESTER MODEL 64 & MODEL 490 .22 CAL.

SPECIFICATIONS:

CALIBRE .... .22 L.R.
CAPACITY .... 10 ROUNDS DETACHABLE BOX MAGAZINE
TYPE OF FIRE .... SELECTIVE; SEMI AND FULL AUTOMATIC FIRING FROM CLOSED BOLT SYSTEM

REMARKS: LOADING, UNLOADING, AND FIRING THE WEAPON ARE ACCOMPLISHED IN THE SAME WAY AS WITH THE ORIGINAL COMMERCIAL SEMI AUTOMATIC RIFLE.

THE SAFETY SELECTOR LEVER AND ITS FUNCTION:

The safety selector lever has three position settings and is conveniently located where the thumb can manipulate it freely.

The first setting is SAFE, the second is SEMI AUTO, and the third is FULL AUTO.

SEMI-AUTOMATIC FUNCTIONING:

Set the selector lever to the semi-automatic notch. Like most of the systems described herein, the trigger utilizes a trip to engage with the sear. At this setting, the selector pin notch is deep enough to permit overtravel of the trigger to disengage its trip from the sear. This will cause the sear to bounce back to normal position during bolt travel. The trigger must then be released for each successive shot.

FULL AUTOMATIC FUNCTIONING:

Set the selector to the full automatic setting. In this setting, the selector pin notch is not as deep as the semi-automatic notch is. This is necessary to control and prevent overtravel of the trigger so the trip will not disengage from the sear. When the trigger is pressed in this mode, the trip will hold the sear down and out of engagement with the hammer, resulting in full automatic functioning.

THE AUTOMATIC CONNECTOR AND ITS FUNCTION:

The automatic connector has a built in sear to catch the hammer (in the Squires Bingham model it is the firing pin) during rearward recoil, holding it in cocked position until its connector toe is forced up or tripped by the fully closing bolt face. This will release the hammer to hit the firing pin (this applies on the full automatic setting), to fire the weapon fully automatically.

CONSTRUCTION DETAIL:

As with most of the conversion models described herein, use of steel sheet 1/16 inch thick for the new trigger housing frame is prescribed. The trigger mechanism (trigger, sear, connector, etc.) is constructed from 1/4 inch steel plate. The grip is one piece stock secured to the trigger housing frame by a single screw mating with a cross bolt nut in the stock.

The connector cover is also a formed steel sheet about 1/16 inch thick.

Refer to diagrams for full scale illustrations and style.

NOTES FOR WINCHESTER MODEL 64 SELECTIVE FIRE CONVERSION (ALSO APPLIES TO THE WINCHESTER MODEL 490)

Except for external configuration and minor improvements, the Model 64 .22 semi automatic rifle as manufactured in Canada by Winchester - Cooey is basically the same in internal mechanism and operation as the new improved Winchester Model 490.

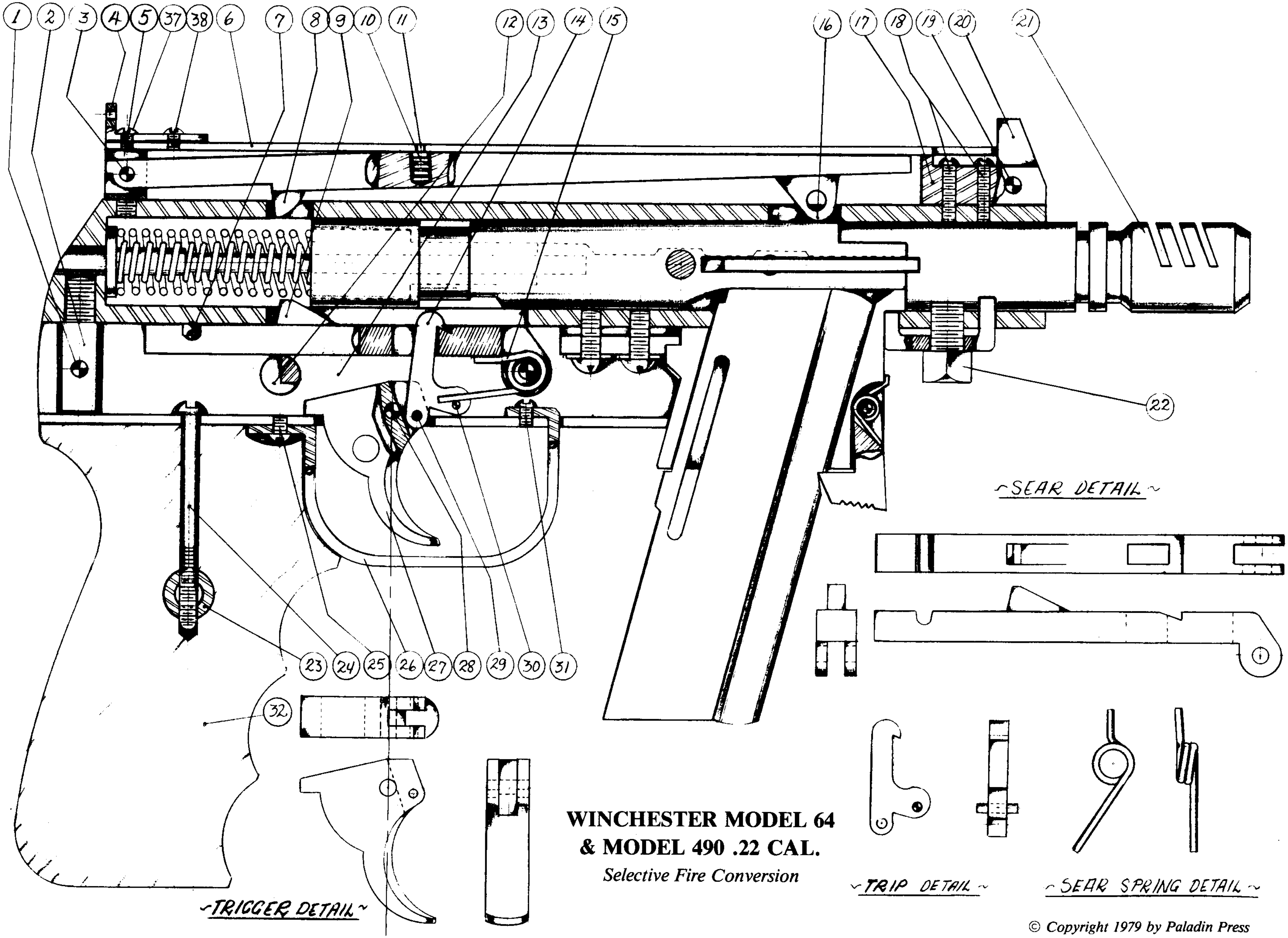
The selective fire conversion principle for the Model 490 is essentially the same as the Model 64 conversion. Minor adjustment is necessary due to a different type of receiver used on the Model 490. The Model 64 is more adaptable for machine pistol configuration due to its compact and slimmer receiver.

To attain a reliable and positive operation, especially in full automatic functioning, it is necessary to ensure that the bolt is fully closed before the hammer activates the firing pin. Make this adjustment by filing the connector toe until proper timing of the hammer release by the closing bolt is achieved.

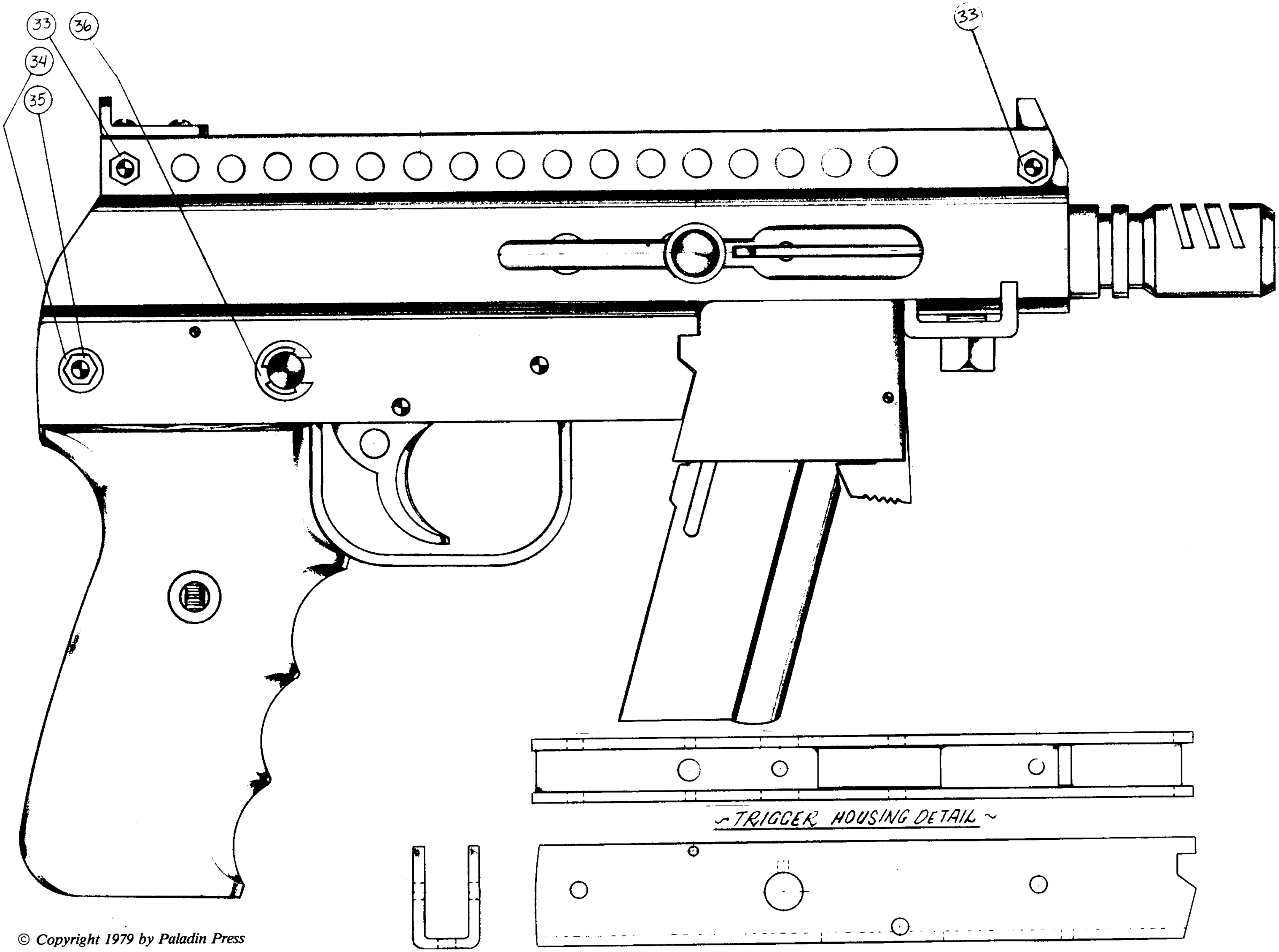
If the hammer is released too soon—before the bolt has closed fully—the hammer will hit the rear of the bolt, but not the firing pin, resulting in misfiring during full automatic functioning. Early hammer release might also cause a feeding malfunction. Since the hammer is pressing against the firing pin while hammer and bolt travel together, the tip of the firing pin protrudes at the bolt face, blocking direct alignment of the cartridge nose with the chamber, since the cartridge rim is resting underneath the protruding firing pin. The resulting bent or deformed cartridge fails to feed properly.

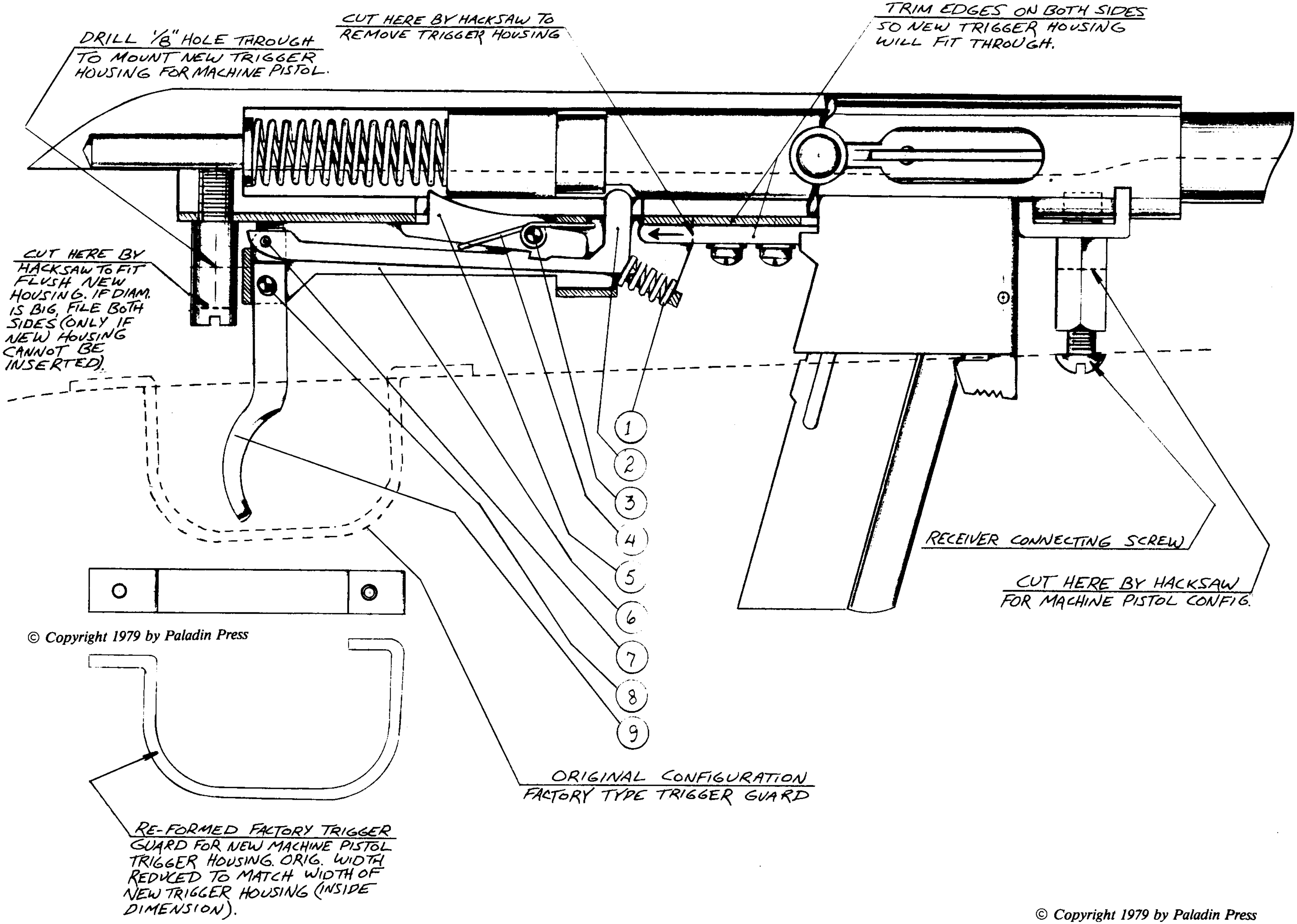
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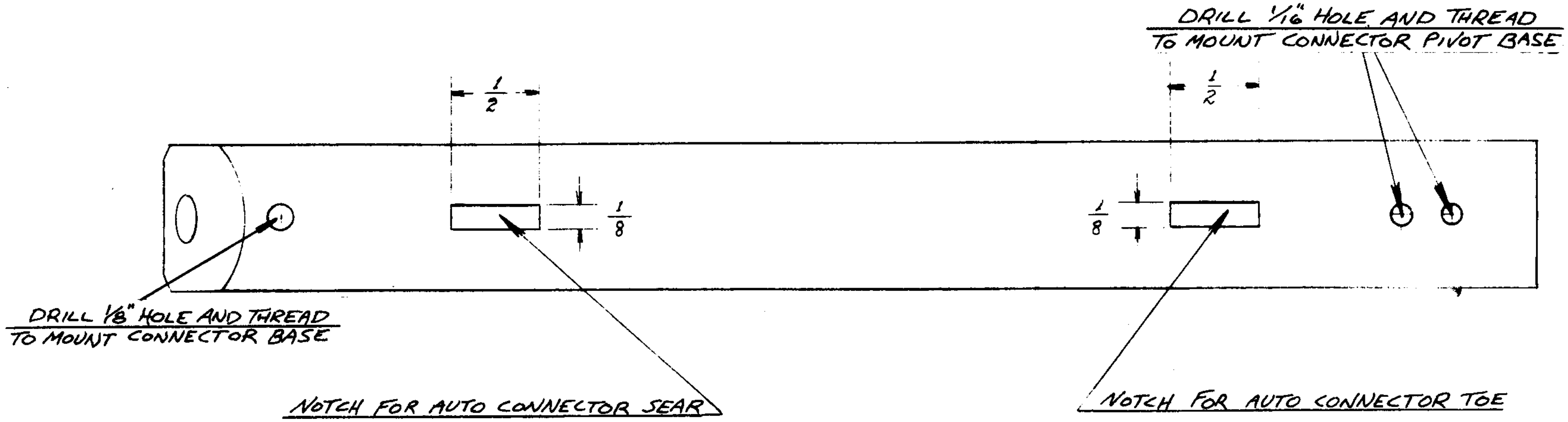
1. *Trigger housing screw*
2. *Base for trigger housing screw (original factory part shortened to conform with new trigger housing.)*
3. *Connector pivot screw*
4. *Rear sight*
5. *Connector base*
6. *Connector assembly cover*
7. *Sear stop pin*
8. *Connector sear*
9. *Sear*
10. *Connector spring*
11. *Connector spring plunger*
12. *Safety - selector lever pin*
13. *Trigger housing (improvised formed steel sheet 1/16 inch thick)*
14. *Trip*
15. *Sear spring (also trip and trigger)*
16. *Toe of connector*
17. *Pivot base for connector assembly cover*
18. *Pivot base retaining screws*
19. *Connector cover pivot screw*
20. *Front sight*
21. *Barrel with built in muzzle brake compensator combination*
22. *Barrel retaining screw (original factory part shortened)*
23. *Cross bolt nut of stock*
24. *Grip stock securing screw*
25. *Trigger guard retaining screw (rear)*
26. *Trigger guard (re-formed from original factory trigger guard)*
27. *Trigger*
28. *Trigger pin*
29. *Trip pin*
30. *Supporting pin (pressed and silver soldered to trip) for sear spring*
31. *Trigger guard screw (front)*
32. *Grip stock (one piece - thickness must conform to receiver width)*
33. *Hex nut*
34. *Steel washer*
35. *Hex nut*
36. *Snap ring for safety selector pin*
37. *Windage screw*
38. *Rear sight screw*
39. *Safety selector lever*
40. *Pin for selector pin*
41. *Index ball spring*
42. *Steel ball (1/8 inch)*

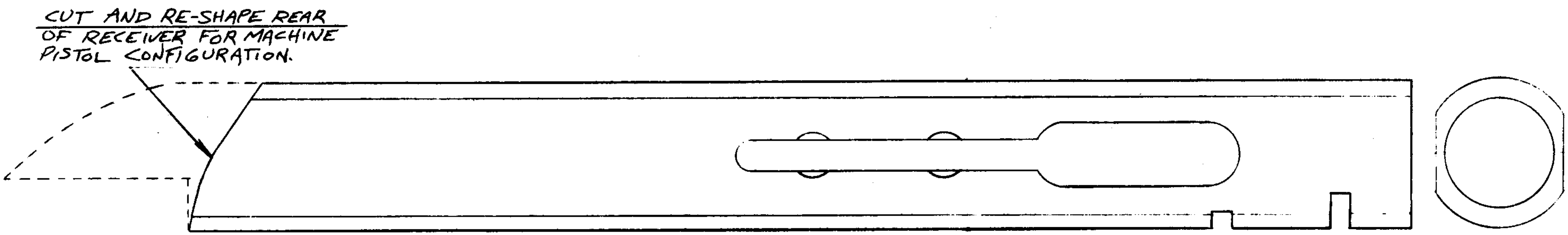


WINCHESTER MODEL 64
& MODEL 490 .22 CAL.
Selective Fire Conversion

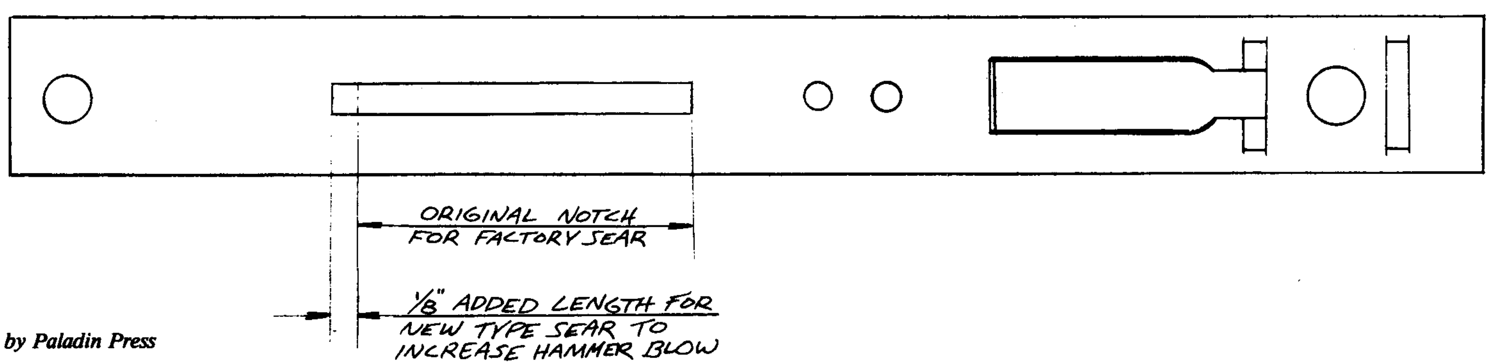

33
36
34
35
33
TRIGGER HOUSING DETAIL

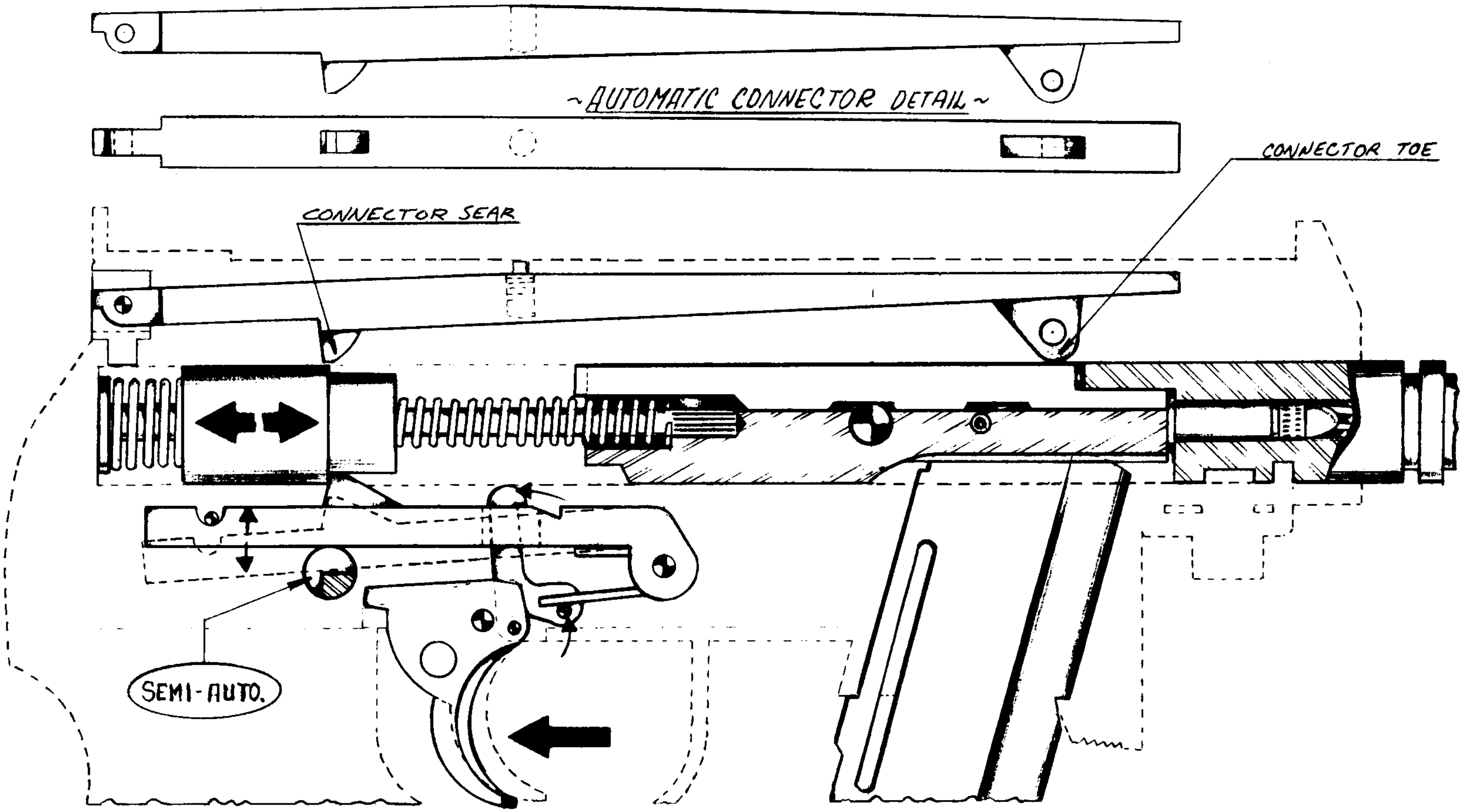

DRILL 1/8" HOLE THROUGH TO MOUNT NEW TRIGGER HOUSING FOR MACHINE PISTOL.
CUT HERE BY HACKSAW TO REMOVE TRIGGER HOUSING
TRIM EDGES ON BOTH SIDES SO NEW TRIGGER HOUSING WILL FIT THROUGH.
CUT HERE BY HACKSAW TO FIT FLUSH NEW HOUSING. IF DIAM. IS BIG, FILE BOTH SIDES (ONLY IF NEW HOUSING CANNOT BE INSERTED).
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RECEIVER CONNECTING SCREW
CUT HERE BY HACKSAW FOR MACHINE PISTOL CONFIG.
ORIGINAL CONFIGURATION FACTORY TYPE TRIGGER GUARD
RE-FORMED FACTORY TRIGGER GUARD FOR NEW MACHINE PISTOL TRIGGER HOUSING. ORIG. WIDTH REDUCED TO MATCH WIDTH OF NEW TRIGGER HOUSING (INSIDE DIMENSION).

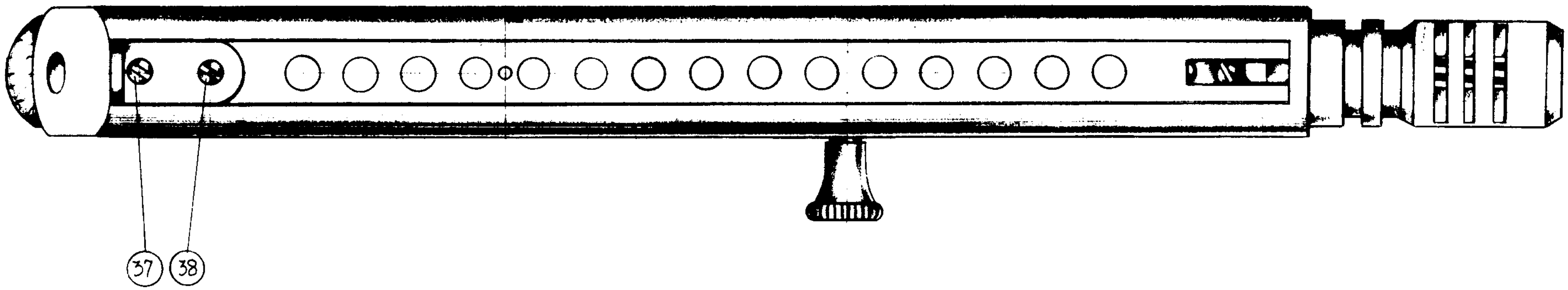


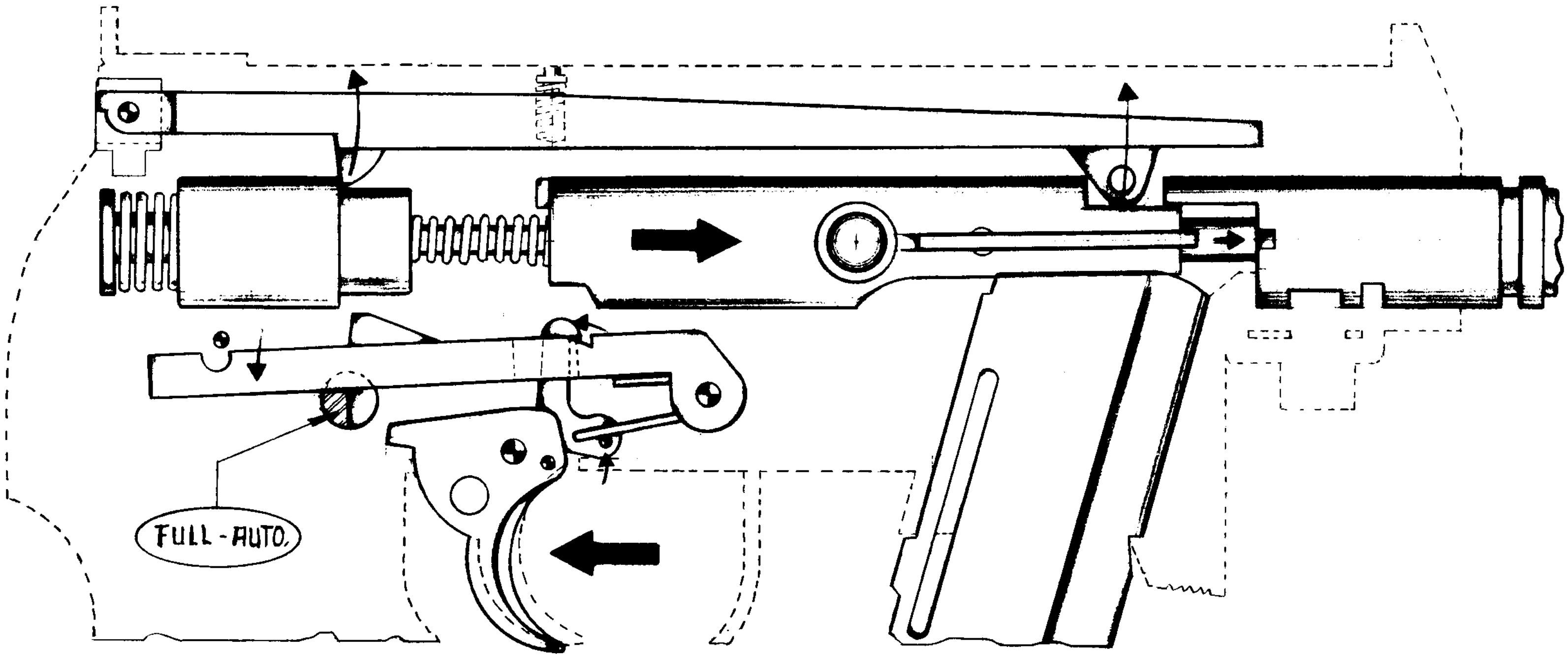


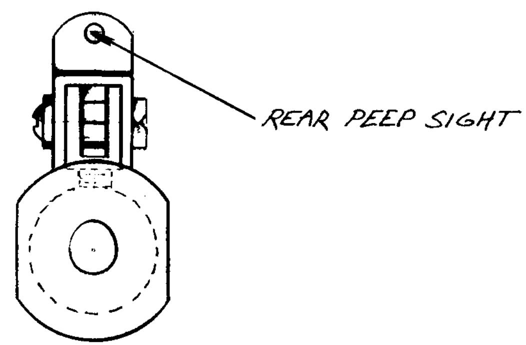
~ RECIEVER DETAIL & MODIFICATION ~
(FOR SELECTIVE FIRE)



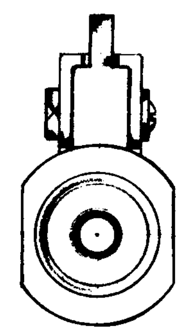

~AUTOMATIC CONNECTOR DETAIL~
CONNECTOR TOE
CONNECTOR SEAR
SEMI-AUTO.



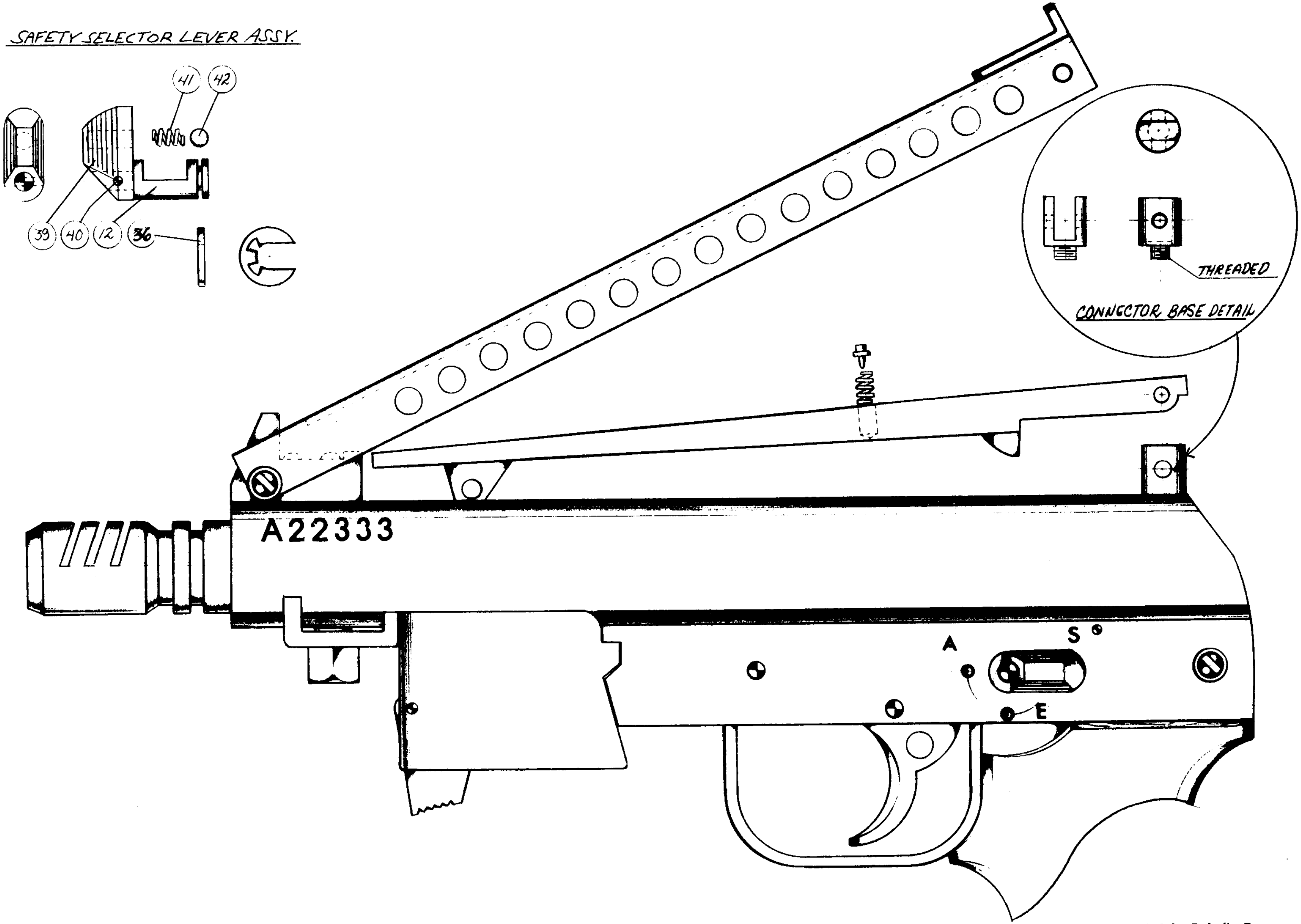




REAR VIEW

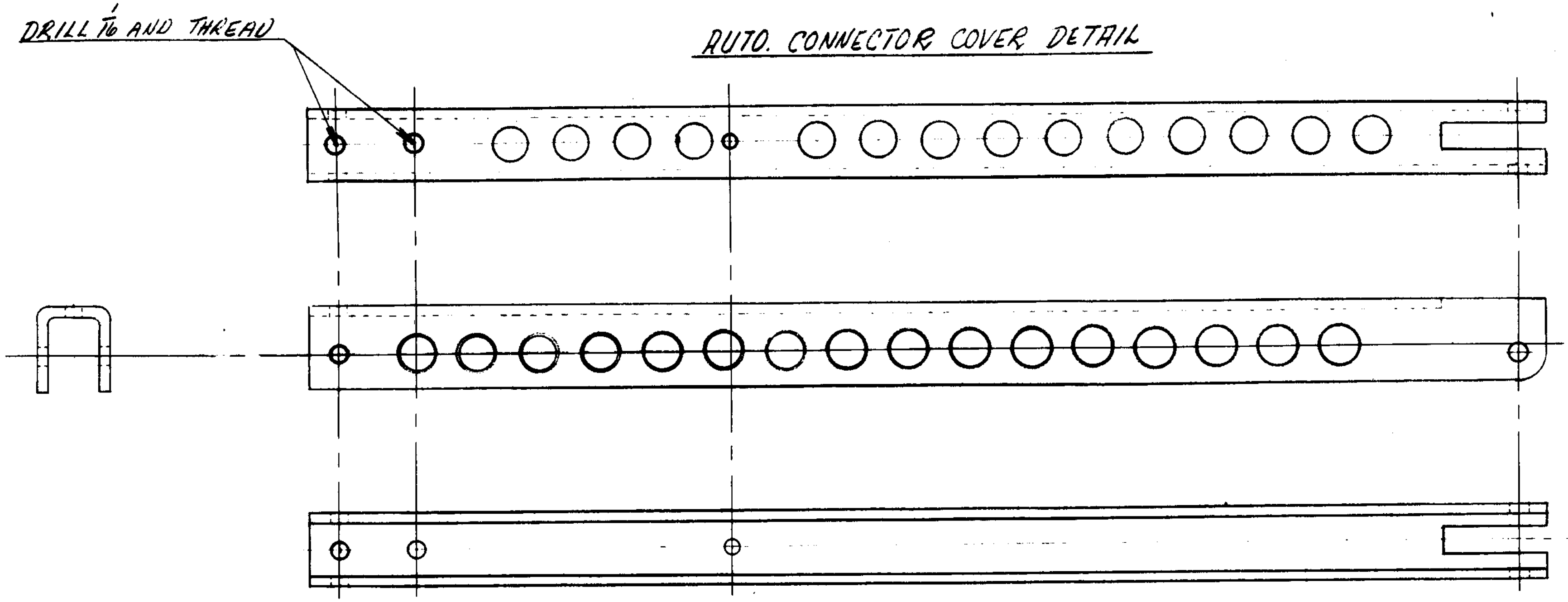


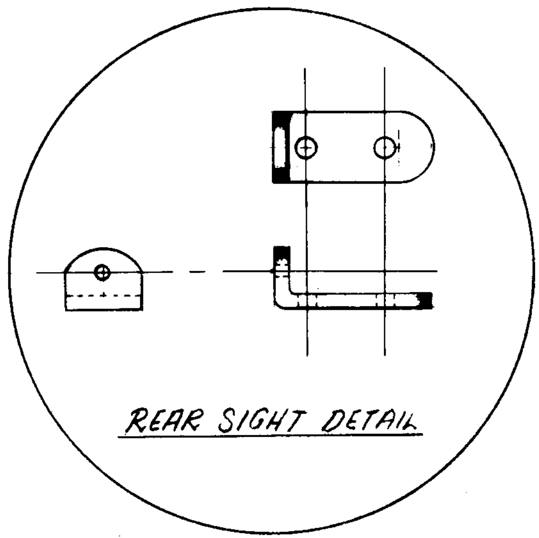
MUZZLE VIEW



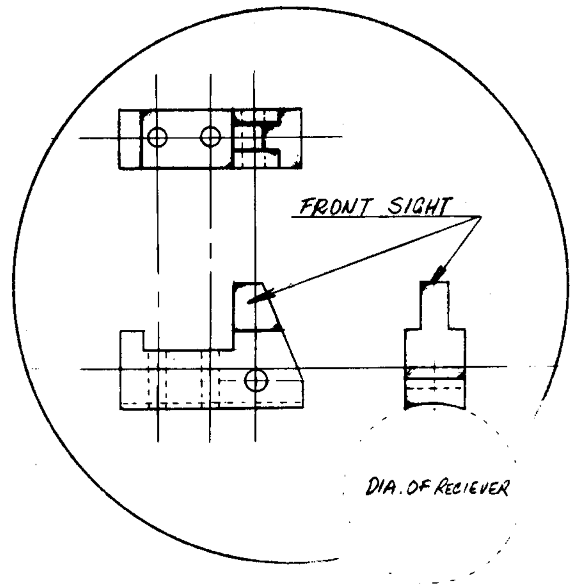
SAFETY SELECTOR LEVER ASSY.
41
42
39
40
12
36
CONNECTOR BASE DETAIL
THREADED
A22333
A
S
E

AUTO. CONNECTOR COVER DETAIL





REAR SIGHT DETAIL



CONNECTOR PIVOT BASE DETAIL

THE KNUCKLE GUN

SPECIFICATIONS:

CATEGORY	IMPROVISED SPECIAL PURPOSE WEAPON
CALIBRE	.22 SHORT
CAPACITY	3 ROUNDS
TYPE OF OPERATION	MANUAL LOADING AND EXTRACTING

REMARKS: VARIOUS STYLES AND SIZES CAN BE APPLIED, DEPENDING ON HAND SIZE.

TO LOAD:

Push the latch button on the right side of the breech block. The barrel (knuckle) can now be opened for loading. The push button latch must again be pressed while engaging the barrel back with the breech block.

TO FIRE:

There are two ways to fire the weapon: the weapon can be fired by squeezing hard on the knuckles against the breech block containing the three firing pins. The firing pins will activate the cartridges once they are pressed hard against the rims.

The second way is by simply hitting the knuckles on a solid object. The barrel/knuckle containing the cartridge will press against the firing pins and fire it. Because of the small diameter bore incorporated, the lead will be swaged after leaving the muzzle.

SAFETY:

There is no positive safety in this weapon, although a plunger operated by a strong spring (positioned at the center—preferably a cut-down M1 recoil spring or similar type) forces the breech block and firing pins away from the cartridges. However, this does not make the weapon safe to carry loaded. If the weapon is dropped or sat upon, accidental firing might occur.

A muzzle blast shield is also added to protect the hand from sparks once the weapon is fired. It must be tightly and well fitted, while operating freely by the force of the plunger spring separating the breech block and knuckle.

CONSTRUCTION DETAIL:

To make the weapon lighter, the breech block can be made from high tensible aluminum (3/8 or 1/2 inch thick plate) or similar space age material that can withstand backward pressure from a cartridge caused by a muzzle blast.

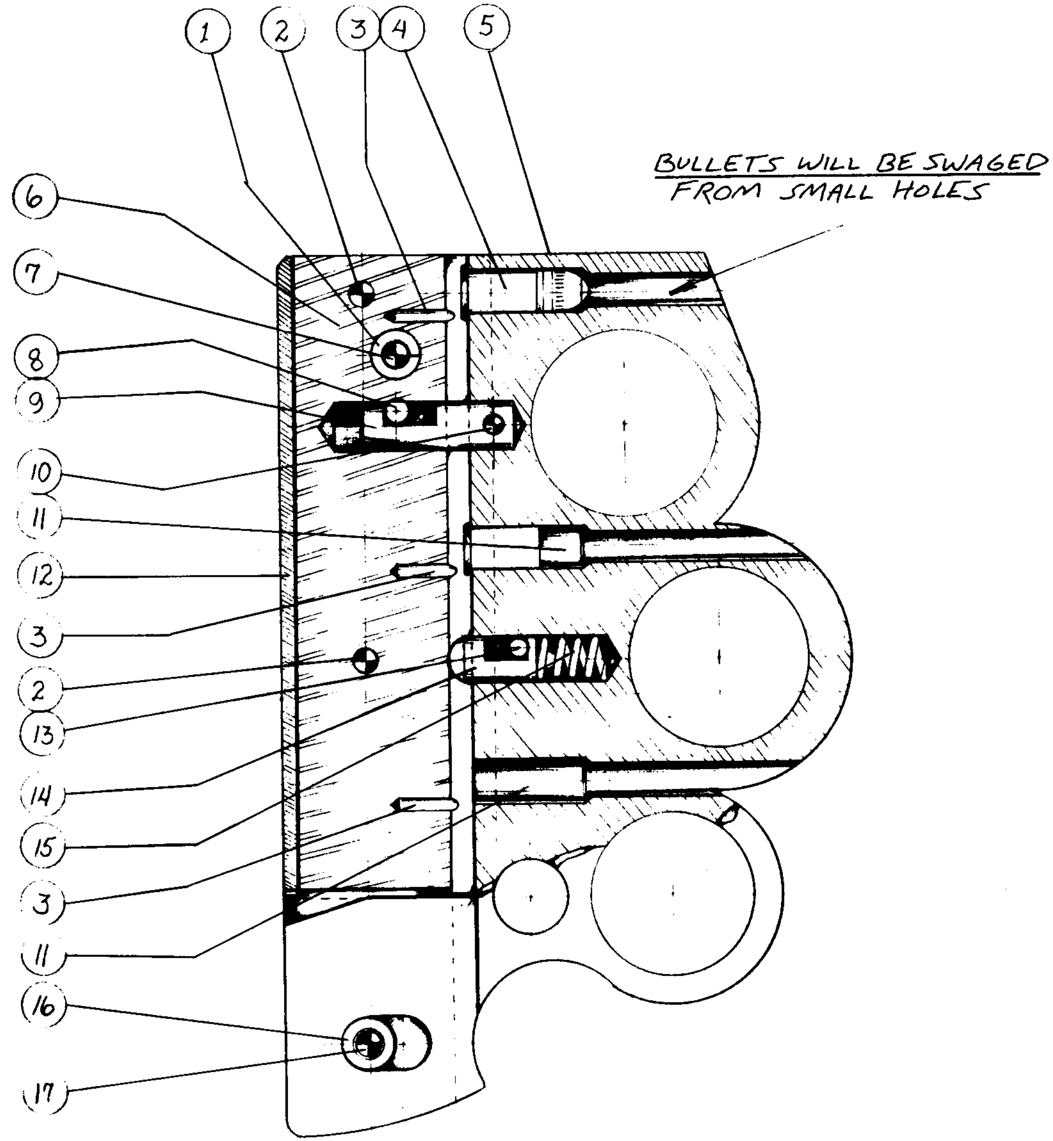
The barrel can be made from high quality steel plate, preferably 3/8 or 1/2 inch thick.

The muzzle shield can be formed from 1/32 inch or thicker steel gauge, and must give full protection to the hand during firing.

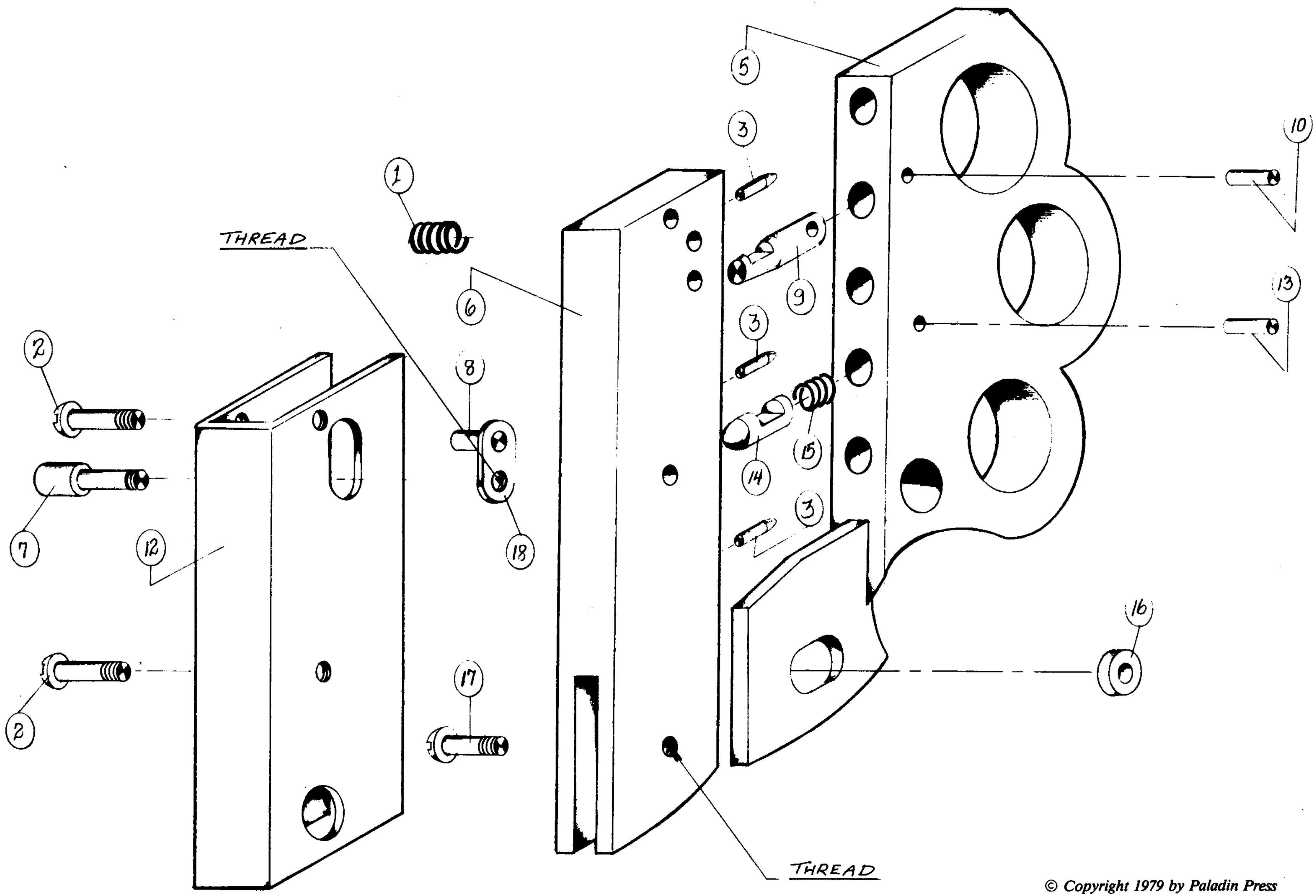
Firing pins are press fitted in place to the breech face.

PARTS LIST

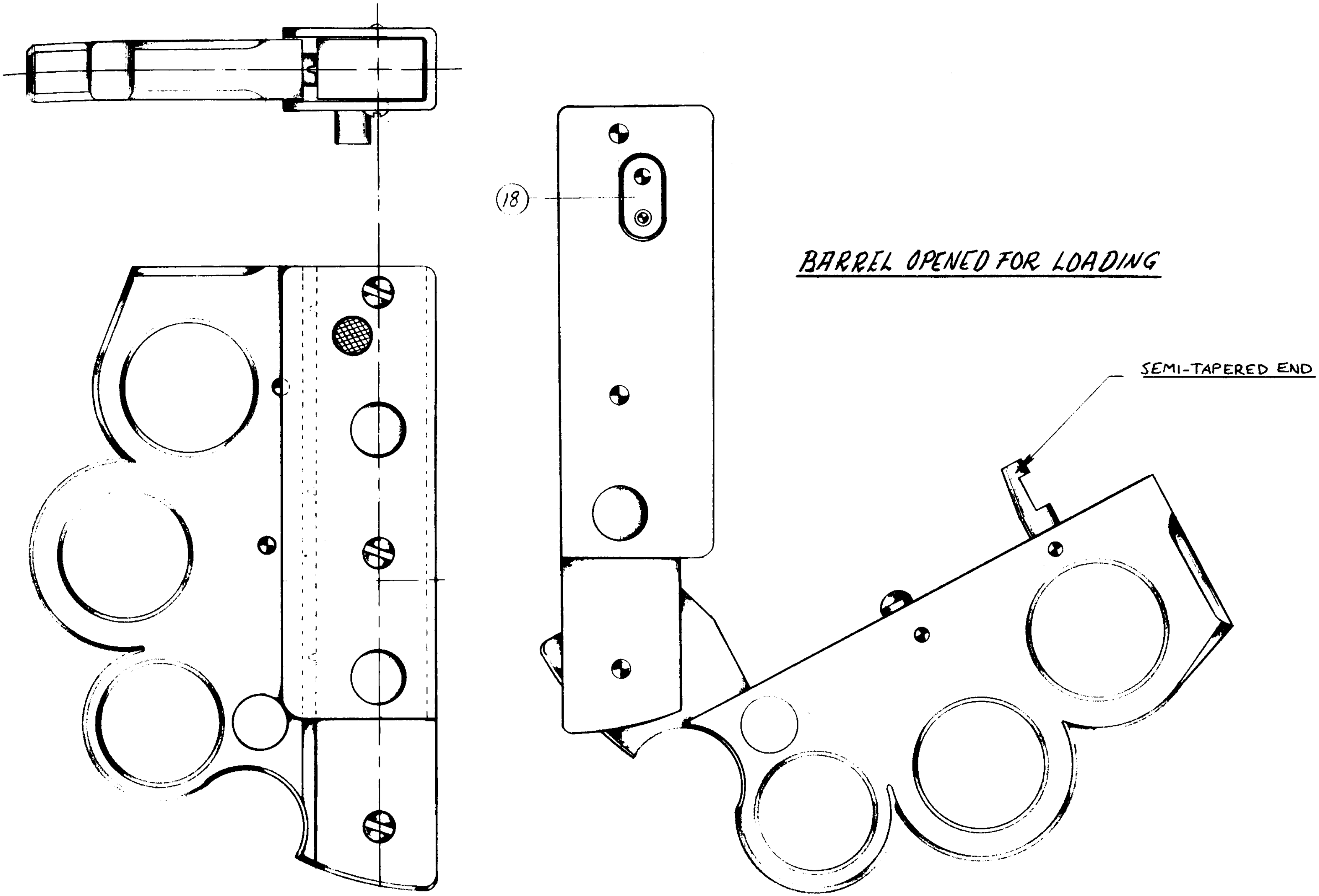
1. *Push button latch spring*
2. *Shield screw*
3. *Firing pins (3)*
4. *Cal. 22 short cartridge*
5. *Barrel/knuckle combination*
6. *Breech block (aluminum)*
7. *Push button latch (pin)*
8. *Latch connecting pin*
9. *Barrel securing bolt*
10. *Securing bolt retaining pin*
11. *Chamber (cal. 22 short)*
12. *Shield (protects hand from sparks)*
13. *Retract plunger (pin)*
14. *Retract plunger*
15. *Retract plunger spring*
16. *Roller*
17. *Roller/knuckle pivot screw*
18. *Sear pin with spacers on both sides*



THE KNUCKLE GUN



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THREAD
THREAD


(18)
BARREL OPENED FOR LOADING
SEMI-TAPERED END

FRONT BOLT ACTION ASSAULT SHOTGUN

SPECIFICATIONS:

CATEGORY .... IMPROVISED; NOTE: CAN BE MANUFACTURED COMMERCIALLY
CALIBRE .... 410 TO 12 GAUGE; ADAPTABLE
CAPACITY .... 8 TO 10 ROUNDS, .410 CAL.
OPERATION .... SINGLE COLUMN MAGAZINE FEED, MANUAL BOLT ACTION—CAN BE MANUFACTURED FOR SEMI OR SELECTIVE FULL AUTOMATIC FIRE.

REMARKS: THIS SHOTGUN IS A REMARKABLE IMPROVEMENT OVER CONVENTIONAL BOLT ACTION SYSTEMS. POSITIONING ITS BOLT ACTION OPERATION IN FRONT PERMITS FASTER OPERATION, SINCE THE HAND THAT OPERATES THE TRIGGER DOES NOT LEAVE ITS POSITION. BOLT OPERATION AND MAGAZINE LOADING ARE ACCOMPLISHED WITH THE LEFT HAND. THE STRAIGHT STOCK CONFIGURATION ELIMINATES EXCESSIVE MUZZLE JUMP AND ALLOWS FASTER RECOIL RECOVERY. THIS SYTEM IS ADAPTABLE TO HIGH POWERED CENTER FIRE AMMUNITION.

TO LOAD:

Insert the loaded magazine in the receiver until the magazine catch snaps firmly. Magazine capacity will depend on the size and calibre of the weapon.

TO FIRE:

The bolt handle operates the same as in a conventional bolt action system. Tilt the handle 45 degrees upward and pull it all the way towards you. Push the handle back to feed a round into the chamber from the magazine. A spring operated firing pin will now engage the sear, ready to ignite the cartridge.

The trigger must be released after each shot. This releases the sear to engage with the firing pin lug.

SAFETY:

A safety mechanism is incorporated to block sear movement when applied. The safety lever is operated by the same (left) hand that operates the bolt mechanism and loading.

CONSTRUCTION DETAIL:

BARREL: Improvise the barrel (if no commercial barrel is available) from seamless tubing. An enforcement jacket should be employed to strengthen the barrel. Enforce the muzzle with steel sheet molded and formed as the front sight. Both the barrel enforcement jacket and muzzle front sight enforcement should be welded or brazed in place.

Another tube of smaller diameter containing the bolt extension where the bolt handle is housed should be brazed or welded on top of the barrel for solid mating.

BOLT: The bolt must be of good quality steel. It requires some simple machining or can be built by hand, using assorted files, drills, and patience. It should feed reliably when operated.

The bolt is connected to the bolt extension or carrier by means of a connecting block. The bolt is pinned solidly to this block, while the bolt extension or carrier rotates freely when the bolt handle is tilted to load and extract empties. The sole bolt lock is the notch on the bolt extension tube where the bolt handle rests in its downward position.

TRIGGER HOUSING FRAME: The trigger housing frame is a simple formed steel sheet 1/16 inch thick. Form it so that the magazine

can be inserted fully and easily when loaded.

TRIGGER MECHANISM: The entire trigger mechanism should be 3/8 inch thick, if possible. It will need spacers to fit properly inside the wide trigger housing.

GRIP: The grip is one piece construction made from plastic or wood stock. It is retained in place to the housing frame by a single screw mating with the cross bolt nut on the grip stock.

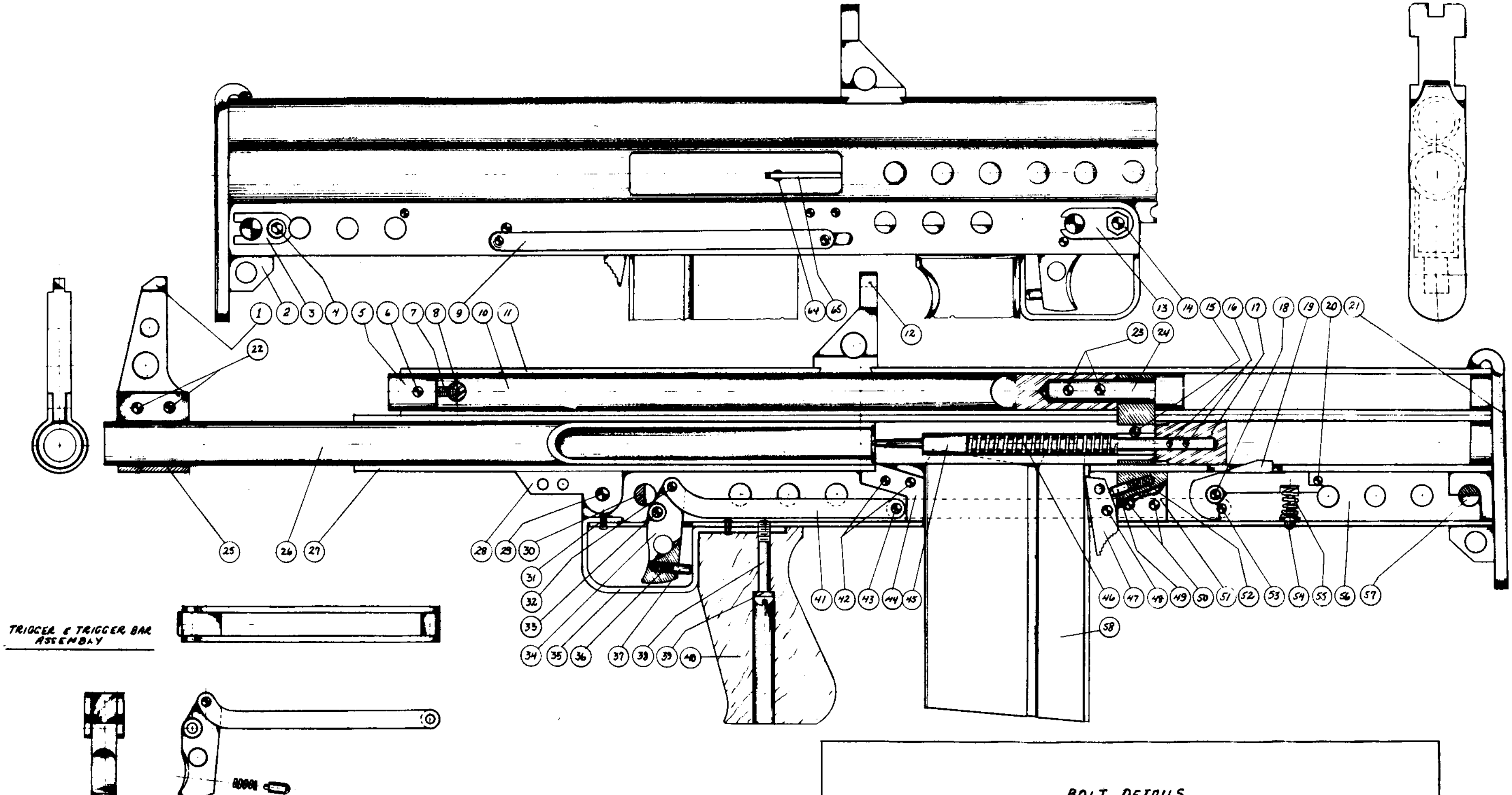
RECEIVER REAR COVER - BUTT PLATE: The receiver rear cover also acts as a butt plate, containing two steel plugs, which are brazed or welded in place. The plate is secured to the receiver by a pin connected to one of the plugs.

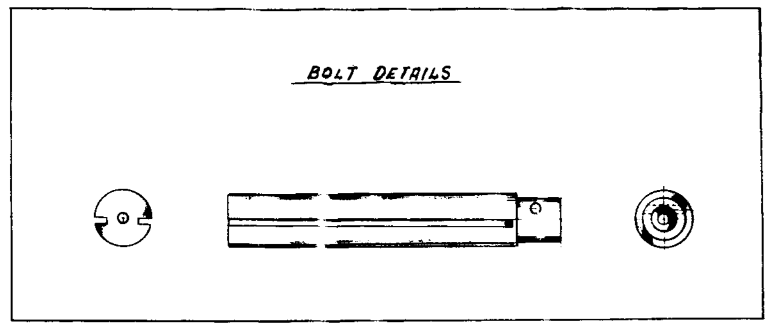
(For related photo, see page 51 *Improvised Modified Firearms Vol. II,* Paladin Press.)

PARTS LIST

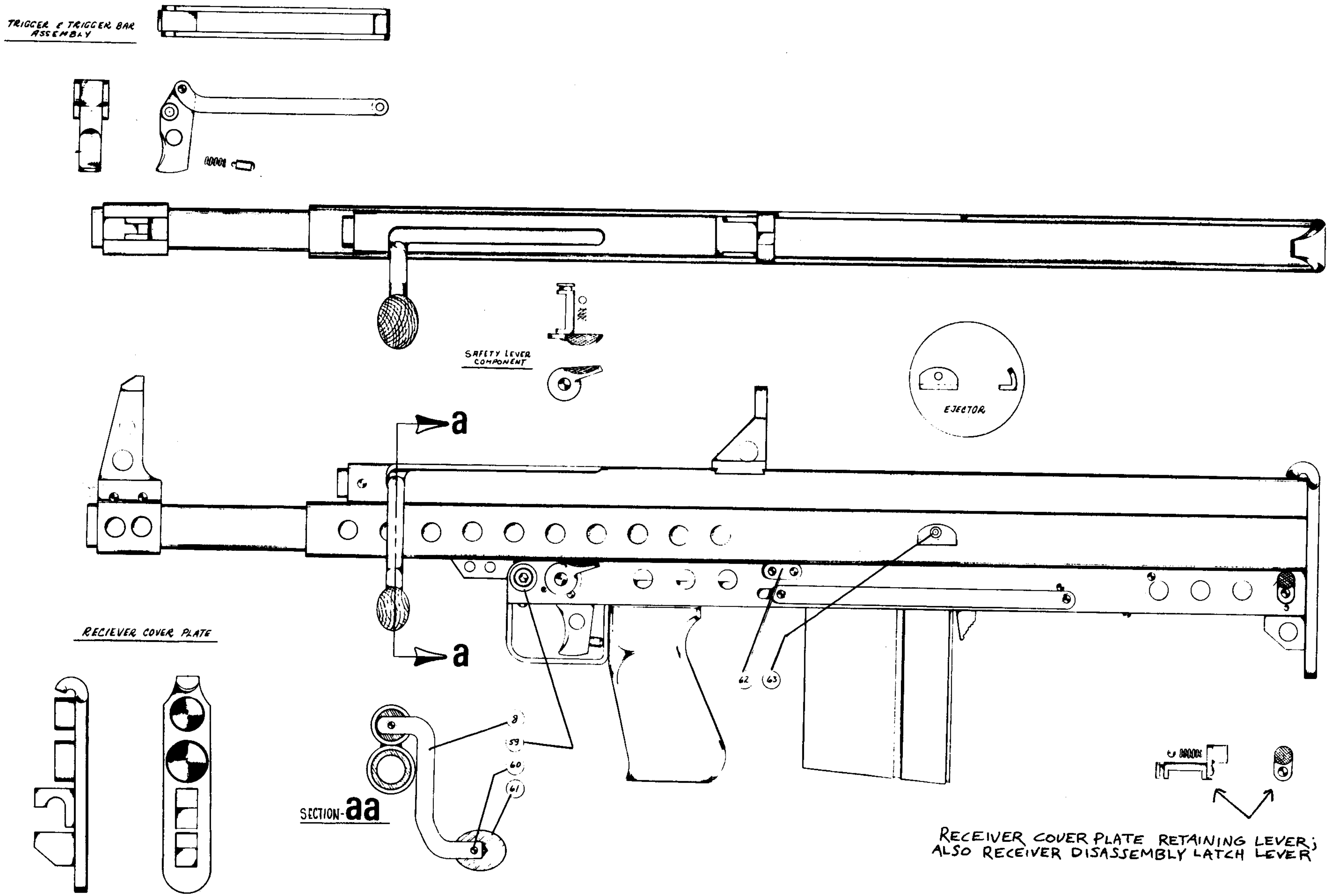
1. *Front sight*
2. *Receiver cover plate lug - secures rear portion of trigger housing (lug is brazed to plate)*
3. *Latch pin retaining plate*
4. *Latch pin retaining plate screw (hex type)*
5. *Cocking handle bolt tube plug*
6. *Plug retaining pin*
7. *Cocking handle retaining screw (headless)*
8. *Cocking handle*
9. *Trigger bar extension link - positioned on both sides of receiver (outside)*
10. *Cocking handle bolt*
11. *Cocking handle bolt tube - brazed to barrel jacket (can also be welded in place)*
12. *Rear sight*
13. *Safety lever retaining plate*
14. *Receiver pivot screw nut*
15. *Firing pin spring plug retaining pin*
16. *Pins connecting firing pin extension to base*
17. *Base of firing pin*
18. *Sear pin with spacers on both sides*
19. *Sear*
20. *Sear stop pin*
21. *Receiver cover plate*
22. *Front sight retaining pins*
23. *Pins connecting cocking handle bolt to bolt carrier securing bolt*
24. *Bolt carrier securing bolt*
25. *Base of front sight - brazed to barrel*
26. *Barrel - brazed to barrel jacket*
27. *Barrel jacket (to support strength of barrel if commercial barrels are not accessible)*
28. *Receiver connecting lug - welded or brazed to jacket*
29. *Receiver / trigger housing connecting screw*
30. *Safety lever pin*
31. *Trigger guard rivet (2)*
32. *Trigger bar connecting pin*
33. *Trigger pin with spacers on both sides*
34. *Trigger*
35. *Trigger guard*
36. *Trigger plunger spring*
37. *Plunger spring*
38. *Grip screw*
39. *Steel washer for screw*
40. *Grip stock (one piece - wood)*
41. *Trigger bar (2 pr.)*
42. *Feed ramp retaining pins*
43. *Trigger bar / trigger bar extension connecting pins (riveted)*
44. *Feed ramp (insert - formed plate)*
45. *Firing pin*
46. *Firing pin spring*
47. *Magazine catch*
48. *Catch pin*
49. *Catch plunger*
50. *Magazine catch plunger assy. base pins - riveted*
51. *Base for plunger assembly (steel plate)*
52. *Magazine catch plunger spring*
53. *Trigger bar extension / sear connecting pin*
54. *Sear spring retaining bolt*
55. *Sear spring*
56. *Trigger housing frame - formed steel sheet*

57. Latch lever pin
58. Magazine assembly – (improvised) depending on calibre & capacity required.
59. Steel washer
60. Cocking handle knob retaining pin
61. Cocking handle knob
62. Feed ramp pin plate
63. Screw (hex type) retaining ejector
64. Extractor spring (coil type)
65. Extractor





FRONT BOLT ACTION ASSAULT SHOTGUN


TRIGGER & TRIGGER BAR ASSEMBLY
SAFETY LEVER COMPONENT
EJECTOR
a
a
RECIEVER COVER PLATE
8
59
60
61
SECTION-aa
62
63
RECEIVER COVER PLATE RETAINING LEVER; ALSO RECEIVER DISASSEMBLY LATCH LEVER

REVOLVER/KNIFE

SPECIFICATIONS:

CALIBRE .... .22 MAGNUM RIMFIRE
CAPACITY .... 8 SHOTS
BARREL LENGTH .... 2" STANDARD - LONGER BARREL CAN BE SUBSTITUTED
CLASSIFICATION .... IMPROVISED - HANDMADE

REMARKS: / KNIFE COMBINATION IS ENCLOSED INSIDE THE GRIP AND CAN BE RETRACTED BY ITS EXPOSED NOTCHED SIDE. THE KNIFE CAN BE USED IN CASE OF EMERGENCY WHEN ALL AMMUNITION IS EXPENDED. TO SIMPLIFY CONSTRUCTION, THERE IS NO BUILT IN EXTRACTOR. ONE HAS TO CARRY A SEPARATE PIECE FOR THIS PURPOSE.

NOTE: VARIANTS OF THIS WEAPON HAVE BEEN MANUFACTURED BY VILLAGE GUNSMITHS NOTABLY IN THE PHILIPPINES, INDONESIA, AND BORNEO.

CONSTRUCTION DETAIL:

The frame is simple formed steel about 1/16 inch thick. The breech block is a steel plate about ¼ inch cut to shape, either by hand or machine.

Village gunsmiths who do not have access to welding equipment simply rivet the breech block plate in place inside the formed receiver. To make the breech block stronger, the joints should be brazed or spot welded, besides being riveted.

In this model, the breech block extension in its lower portion also acts as the knife mount, shield, and the stock base.

OPERATIONAL DETAIL:

The system is manually operated. The hammer is manually cocked each time a shot is to be fired. The cylinder also is turned manually to its index notch to realign to the barrel hole after each shot. The cylinder can be turned either left or right as the shooter prefers.

The cylinder index ball is about 3/16 inch in diameter. It must be operated by an extra strong spring to retain a rigid connection while engaged with the cylinder notch. The index ball and its spring are housed within the barrel back strap and are stationary, retaining the cylinder in place at all times. *This type of cylinder index lock should only be used with .22 calibre rimfire ammunitions.*

The barrel is a steel plate about ½ inch thick drilled and shaped. Again, it can be built by hand or machining techniques. The material used must be good quality steel and the cylinder properly tempered to ensure reliable and safe functioning.

The trigger and hammer mechanism are about as thick as the breech block, about ¼ inch plate. It might be necessary to file or sand the trigger and hammer plates to eliminate the tightness when inserted into the trigger housing during handfitting. Sharp corners must be eliminated if possible to avoid injury when operating.

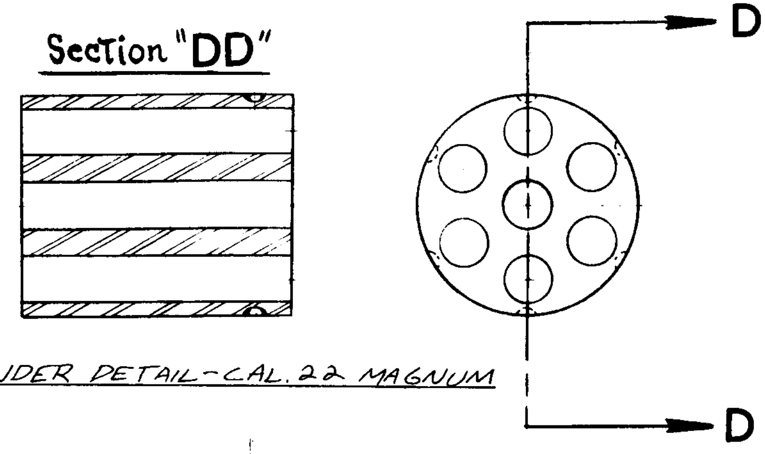
Style and size of grip may vary with individual taste. This will affect the length and style of the knife combination.

The knife blade must be slightly tight at its base. Tightness is controlled by the hex screw securing it at the base. This is an ideal survival weapon combination.

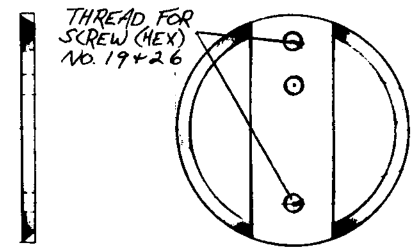
PARTS LIST

1. Rear sight
2. Cylinder (.22 Magnum)
3. Barrel (½ in. thick)
4. Cylinder lock (stop)
5. Cylinder lock spring
6. Cylinder lock spring stop pin
7. Barrel locking pin (riveted or brazed to plate)
8. Cylinder base / extractor comb. retaining pin
9. Cylinder base / extractor combination
10. Barrel pivot screw (hex type)
11. Hammer spring guide support (pin)
12. Hammer spring guide
13. Trigger pin
14. Steel washer (supporting hammer spring against support pin)
15. Trigger spring plunger
16. Trigger
17. Trigger spring
18. Grip stock (2 piece wrap around type)
19. Hex screw (retaining top portion of cylinder back plate)
20. Firing pin stop pin
21. Hammer
22. Firing pin
23. Firing pin spring
24. Barrel locking pin plate return spring
25. Push button latch of locking plate
26. Hex screw (securing bottom portion of cylinder back plate)
27. Hammer pin
28. Receiver (formed steel sheet)
29. Hammer spring
30. Hex screw (securing top portion of grip stock)
31. Grip base and main support for receiver
32. Knife blade
33. Hex screw - securing bottom portion of grip and knife
34. Cylinder back plate
35. Plate for barrel locking pin and push button latch
36. Hex nut
37. Steel washer (2 pr. positioned on both sides of frame)

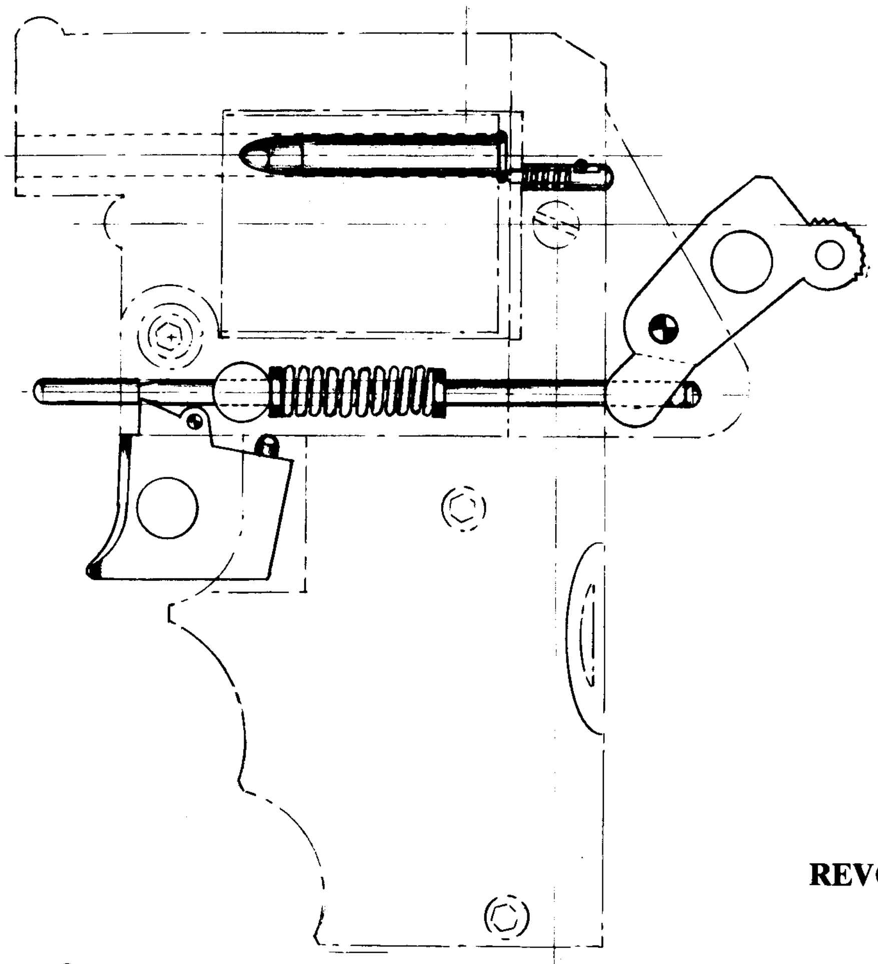
Section "DD"

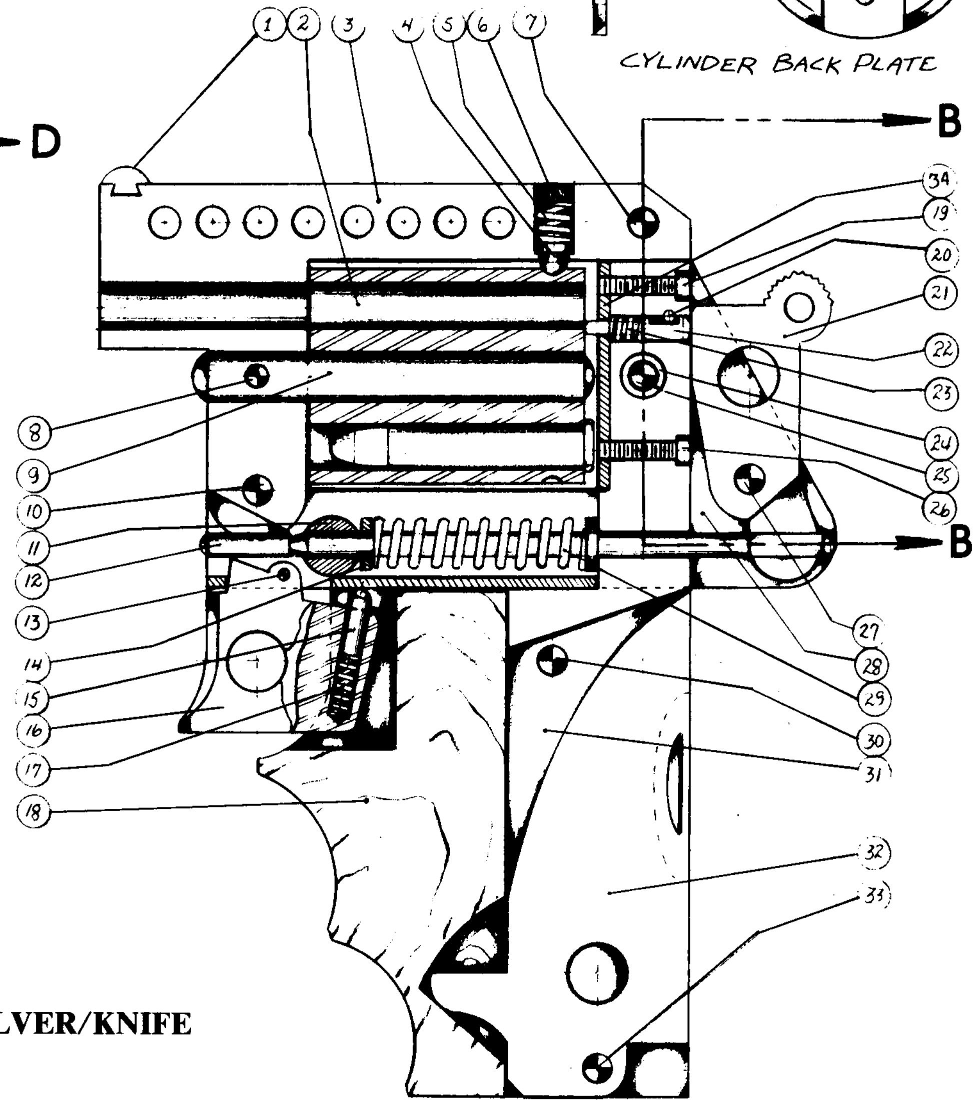


CYLINDER DETAIL-CAL. 22 MAGNUM

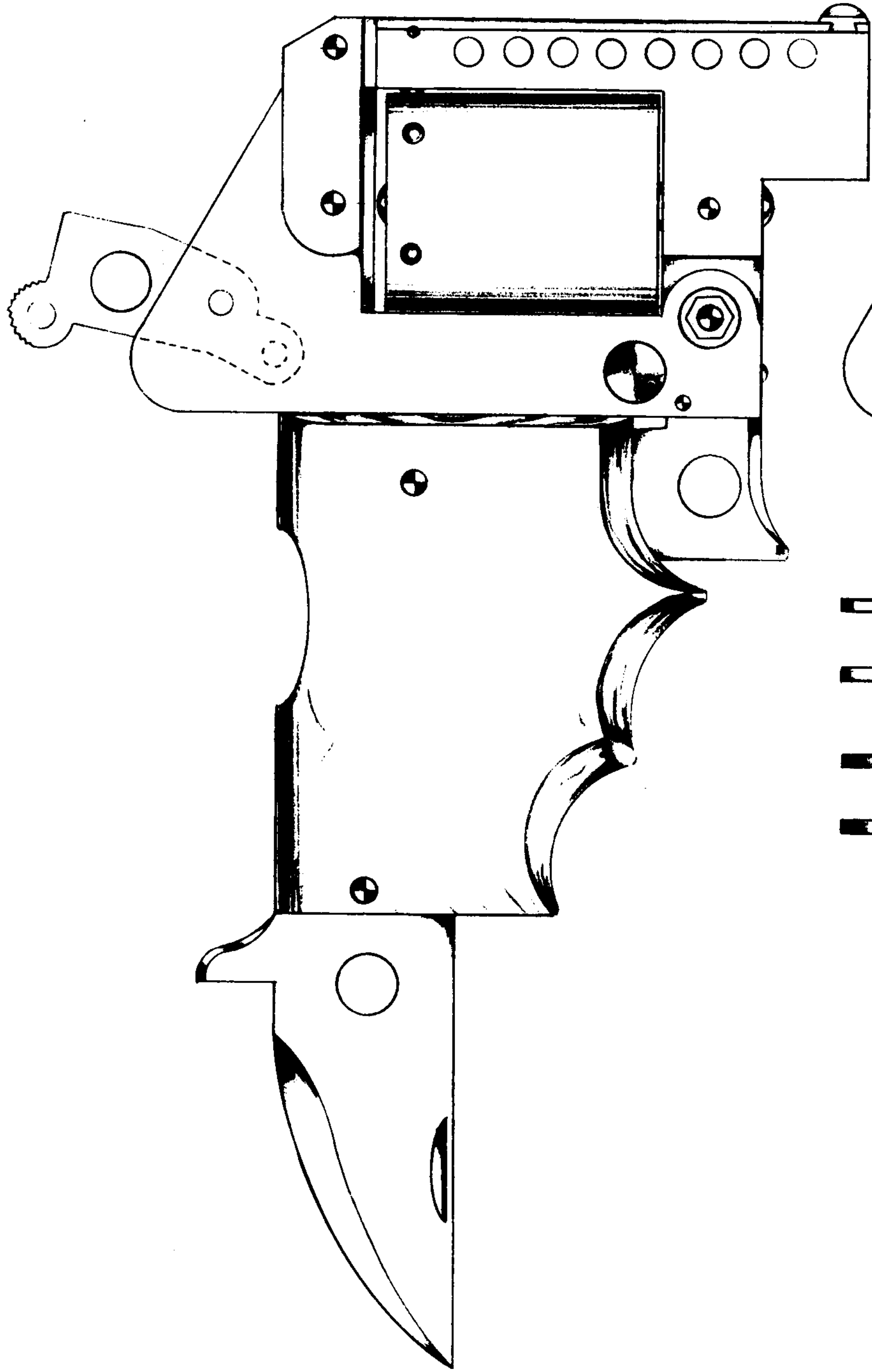


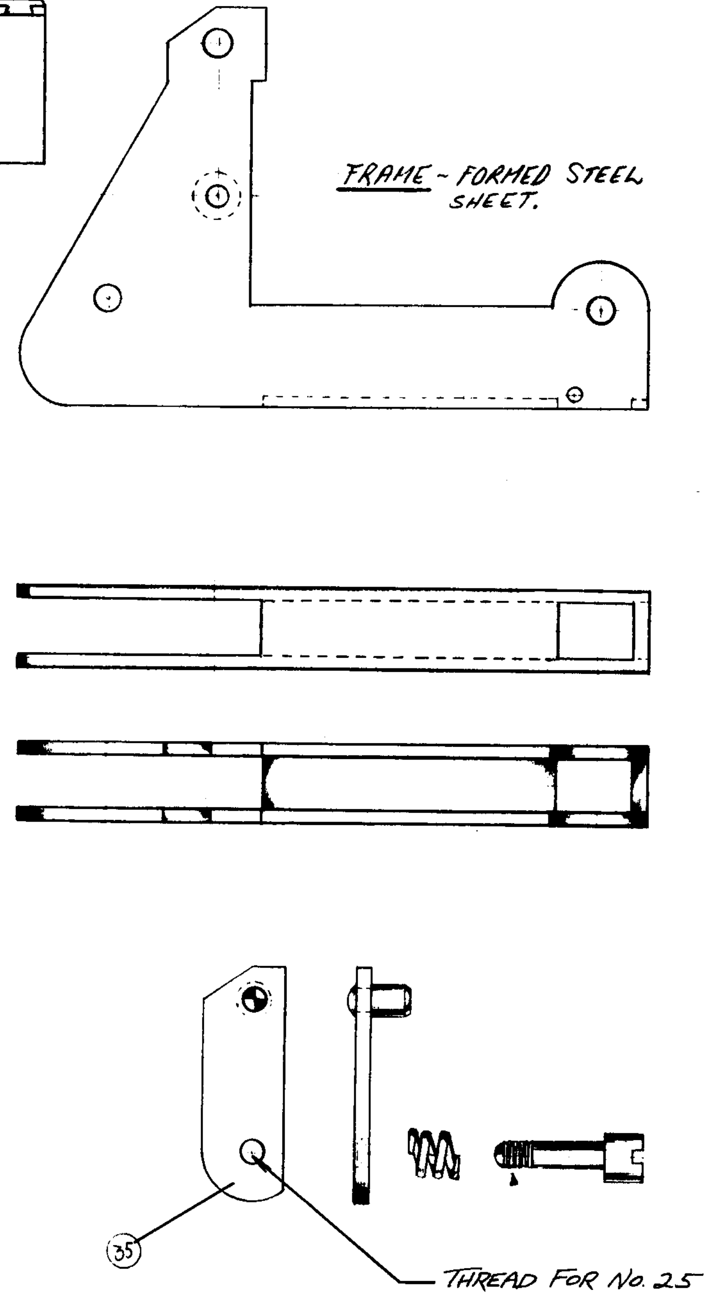
CYLINDER BACK PLATE

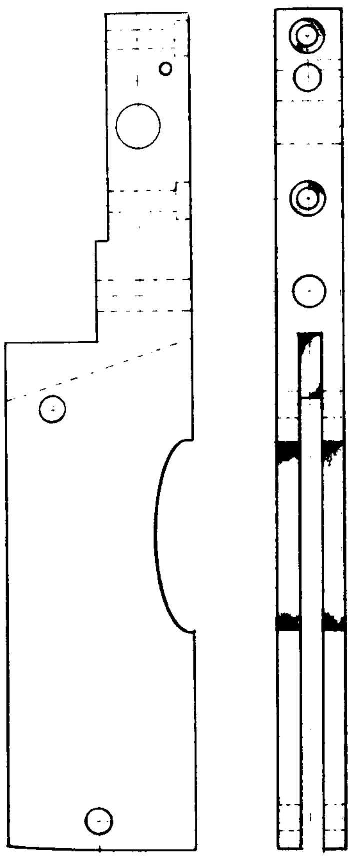




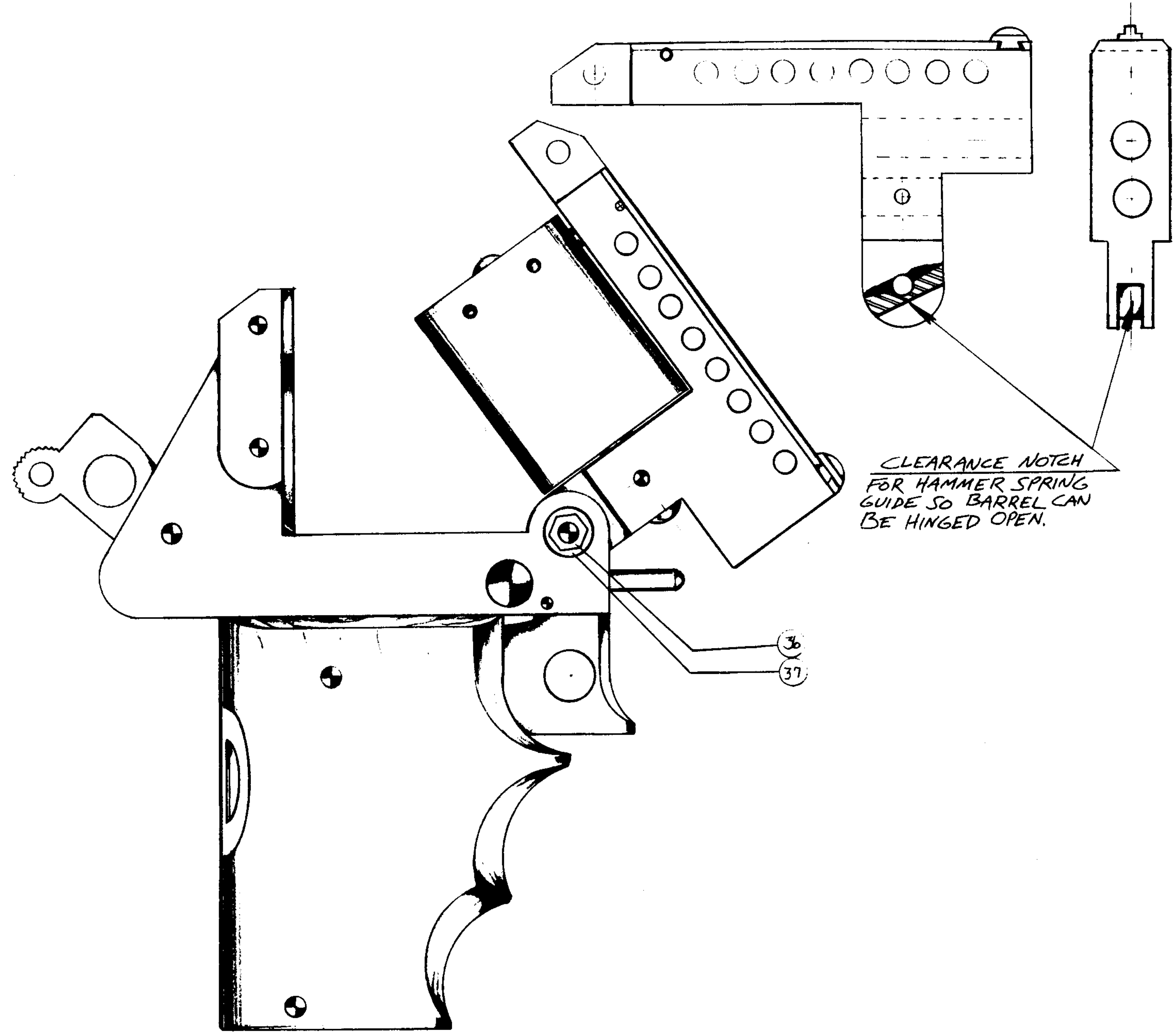
REVOLVER/KNIFE

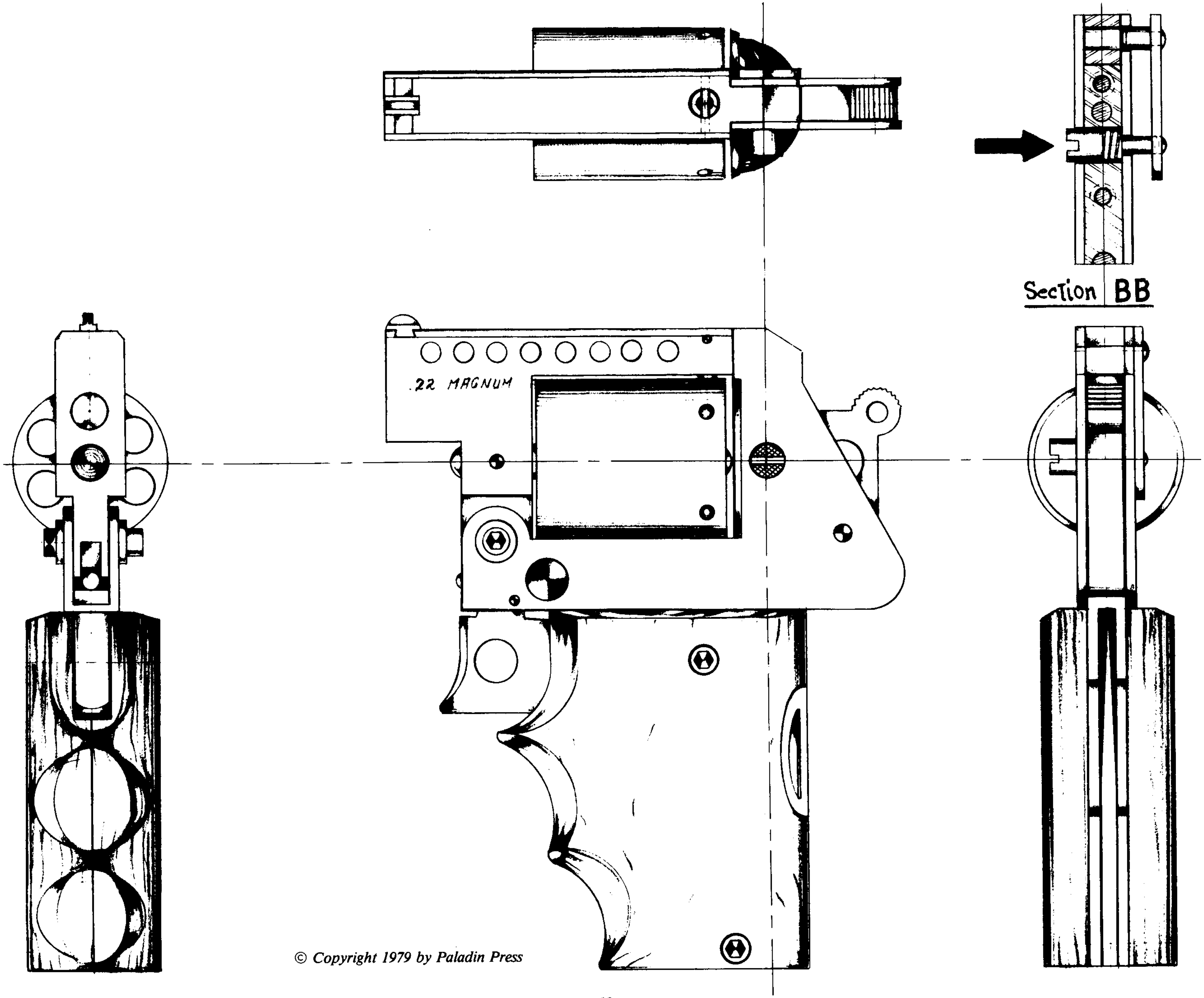



FRAME - FORMED STEEL SHEET.
35
THREAD FOR No. 25



GRIP BASE / RECEIVER MAIN SUPPORT




Section BB
.22 MAGNUM

SLAM BANG SHOTGUN

SPECIFICATIONS:

CATEGORY .... IMPROVISED-HOMEMADE
CALIBRE .... 12 TO .410 GAUGE
CAPACITY .... SINGLE SHOT
EXTRACTOR .... NONE

REMARKS: WIDELY EMPLOYED BY URBAN GUERRILLAS DURING AND AFTER THE SECOND WORLD WAR FOR DEFENSE.

OPERATION DETAIL:

To load the weapon, insert the shell into the barrel (seamless or water pipe tubing). Chamber diameter depends on the type of shell used. After loading the barrel chamber, the rear sleeve grip containing the built-in breech block with firing pin is fit on to the barrel. The rear sleeve normally envelopes the chamber about 10 to 12 inches. This allowance is necessary to give the user a comfortable grip when slamming the sleeve to the barrel to ignite the cartridge. It is advantageous to cut deep serrations or wrap the sleeve with rubber for a positive grip.

It has been a practice by urban users to simply reverse the barrel after firing the first shell and load the other end with another shell, without extracting the empty shell. According to them, the empty shell will be pushed out by the pellets when the weapon is fired. This may have been the major cause of numerous accidents involving the use of this type of weapon. Ignorance and incompetence in the handling of any weapon, either commercial or improvised, often leads to tragic accidents.

CONSTRUCTION DETAIL:

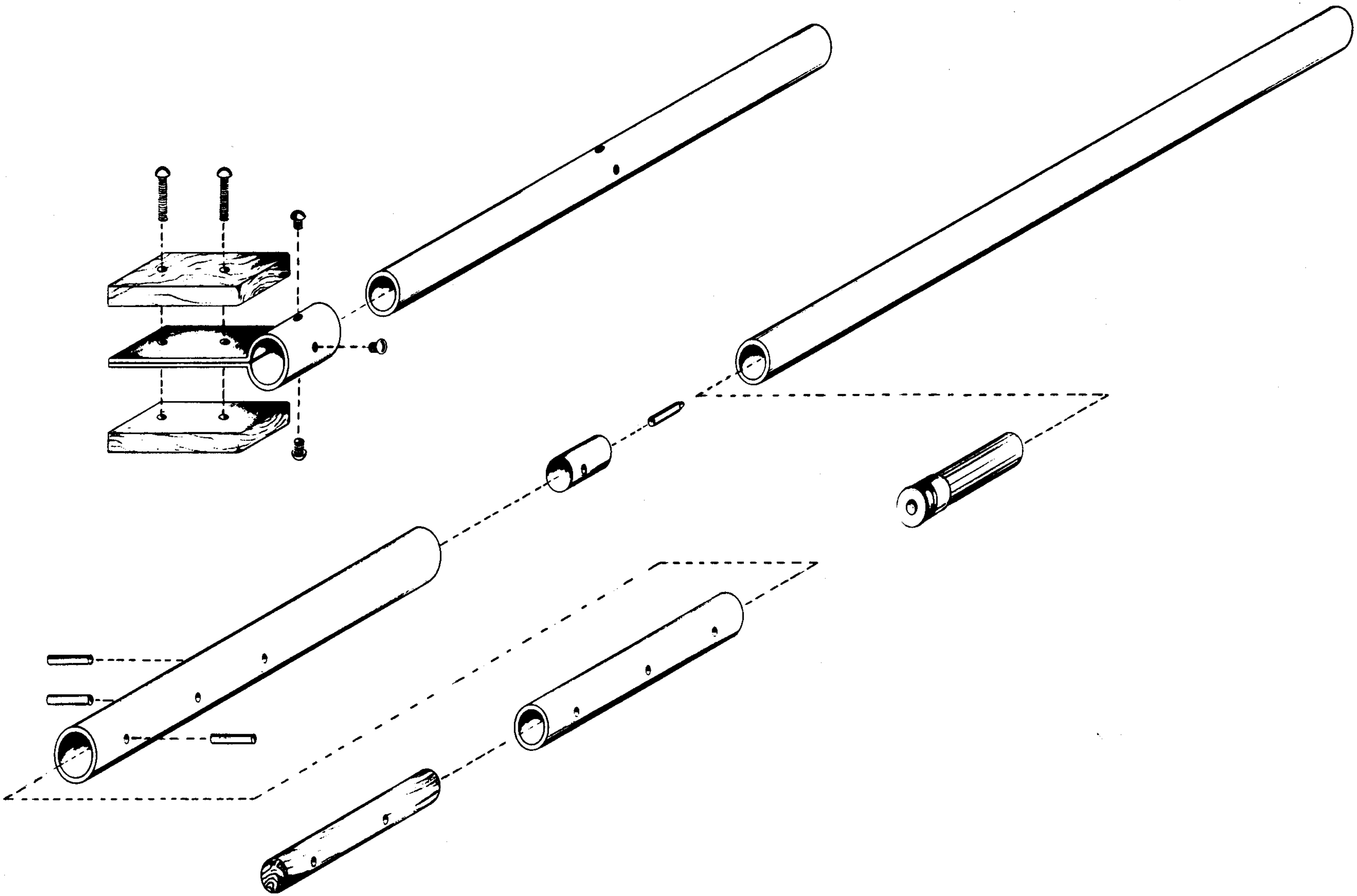
Most weapons of the slam bang type were commonly built with cheap water pipe tubing. Gunsmiths with greater know-how and access to better equipment have built and developed improved models.

Since water pipe barrels tend to blow up, gunsmiths have often brazed an external sleeve to the barrel at the front end and the chamber. Since this procedure increases the weight of the weapon, they shorten the barrel and add a front pistol grip. The pistol grip base is positioned at the center of the barrel by three screws. It is then brazed in place to give the front grip a rigid attachment to the barrel during battery.

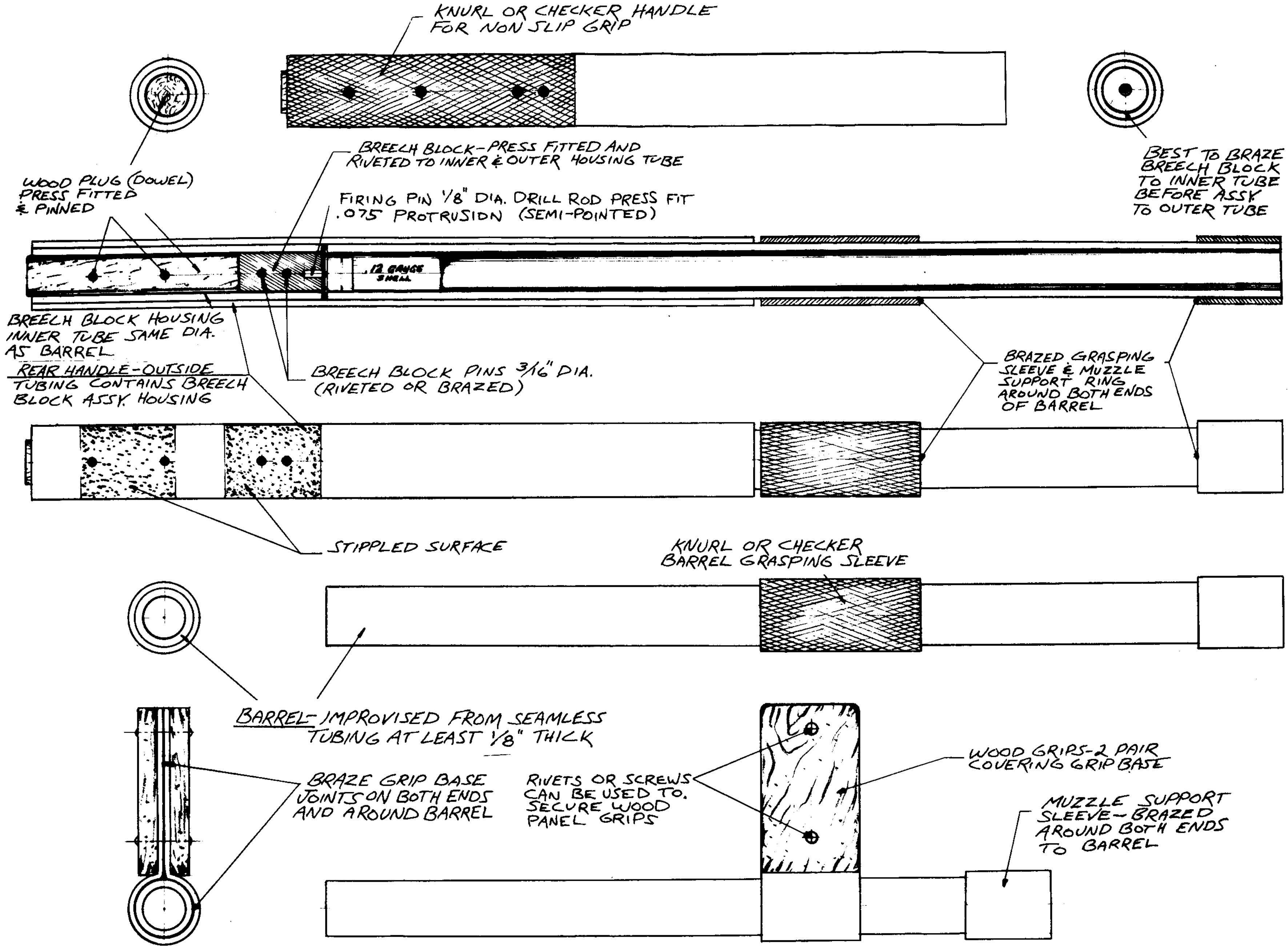
The breech block is contained inside the rear sleeve. It is a solid round steel piece that is tightly pressed inside the sleeve and secured in place by a sturdy pin riveted or brazed to the sleeve. At the center of the breech block is the firing pin made of 1/8 inch diameter drill rod and press fitted to the breech block. The protruding end is pointed to activate the primer of the cartridge. A nail end is often used if no better material is available.

To add weight to the rear sleeve, a wood plug is used to cover the back of the breech block. It is also press fitted and secured by two pins.

NOTE: DUE TO THE USE OF LARGE SHOTGUN SHELLS, IT IS NECESSARY TO MAXIMIZE THE WEIGHT OF THE SLEEVE TO REDUCE SLEEVE RECOIL.



SLAM BANG SHOTGUN


KNURL OR CHECKER HANDLE FOR NON SLIP GRIP
BREECH BLOCK-PRESS FITTED AND RIVETED TO INNER & OUTER HOUSING TUBE
WOOD PLUG (DOWEL) PRESS FITTED & PINNED
FIRING PIN 1/8" DIA. DRILL ROD PRESS FIT .075 PROTRUSION (SEMI-POINTED)
BEST TO BRAZE BREECH BLOCK TO INNER TUBE BEFORE ASSY TO OUTER TUBE
12 GAUGE SHELL
BREECH BLOCK HOUSING INNER TUBE SAME DIA. AS BARREL
REAR HANDLE-OUTSIDE TUBING CONTAINS BREECH BLOCK ASSY HOUSING
BREECH BLOCK PINS 3/16" DIA. (RIVETED OR BRAZED)
BRAZED GRASPING SLEEVE & MUZZLE SUPPORT RING AROUND BOTH ENDS OF BARREL
STIPPLED SURFACE
KNURL OR CHECKER BARREL GRASPING SLEEVE
BARREL-IMPROVISED FROM SEAMLESS TUBING AT LEAST 1/8" THICK
BRAZE GRIP BASE JOINTS ON BOTH ENDS AND AROUND BARREL
RIVETS OR SCREWS CAN BE USED TO. SECURE WOOD PANEL GRIPS
WOOD GRIPS-2 PAIR COVERING GRIP BASE
MUZZLE SUPPORT SLEEVE-BRAZED AROUND BOTH ENDS TO BARREL



Upper Left: Squires-Bingham Machine Pistol; M-16 Conversion To Selective Fire Mode.

Upper Right: AR-7 Machine Pistol Prototype; Selective Fire Modification of AR-7 Explorer .22 Carbine.

Lower Left: Improvised Machine Pistol.

Lower Right: Improvised Machine Pistol and AR-7 Machine Pistol Conversion.

(Note: Squires-Bingham and AR-7 Conversions Are Featured In *Automatic and Concealable Firearms Design Book, Vol. I,* Paladin Press.)







WARNING

It is against the law to manufacture a firearm without an appropriate license from the federal government. There are also state and local laws prohibiting the possession of such weapons in many areas. Severe penalties are prescribed for violations of these laws. Be warned!